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Atavicism*

A Discussion of the Causality of Diverticula of the Human Gut

JAMES JOHN MONAHAN, M.D., F.A.C.S.,
Chicago, Ill.

Diverticula of the gut have for some years been structures of special interest to the medical profession. From a literature almost barren on this subject fifty years ago, observation and the recording of individual cases have built up a literature which today includes records of diverticula in every portion of the intestinal tract, and in every stage of development. In spite of this fact, diverticula are still regarded by many members of the medical profession as exceedingly rare. Because of their supposed rarity they are seldom suspected in the average patient, though that patient give a history of gut troubles and unsuccessful "cures" as long as the moral law.

As long as diverticula of the gut are thus considered rare their recognition by the profession in general will be also rare. We never find to any appreciable extent a structure for which we fail to look. The human animal had an appendix several millions of years before he recognized the fact. He and his brother animals died of "inflammation of the bowels" and kindred diseases for many centuries before any physician suspected the culpability of that insignificant-appearing diverticulum, the appendix. Men have also other diverticula of the gut. For fifty years at least surgeons have been stumbling upon them. When the medical profession ceases to wait to be tripped up professionally by these structures, and starts out with a lantern to find them, it will cease to echo the old fallacy that they are rare.

Diverticula of the gut are not rare. The most casual inquiry among our fellow surgeons will serve to establish the fact that the cases of surgical diverticula that reach the medical press and are thus put on public record are but a small per cent of the cases found. Nor are surgical diverticula the only type deserving of professional recognition. Surgical diverticula represent but the infected cases of diverticular development. There is another type of diverticulum that is chronic rather than acute, that makes itself known by various clinical manifesta-

tions and is productive of an endless array of gut troubles, and yet which has to date been conspicuously neglected in all medical literature on the diverticula of the gut. This is the type of diverticulum so casually passed over as "true."

The grouping of diverticula into the two distinct classes of "false" and "true" is a classification with which we are all familiar. True diverticula have been regarded as congenital; false, as acquired. This grouping is not only unwarranted, but is a handicap to progress in our knowledge of the etiology of diverticula and their control. In only one case, that of Meckel's diverticulum, can the so-called "true" diverticula be demonstrated to be typically congenital. The theory that they are so is detrimental to advancement in the study of this subject, since it tends to center medical interest upon the grossly-infected diverticulum that can be corrected only by surgery, rather than the non-surgical type that can be controlled and often entirely cured. Inasmuch as non-surgical diverticula occur much more frequently than do the surgical type, give rise to symptoms quite as recognizable though less severe, may be recognized by means of the roentgen ray, and are themselves the forerunners of the acute type, their neglect appears decidedly short-sighted. Investigation of cases of "stomach trouble" of long standing, of "intestinal ulcers," of "pelvic disturbances" that have resisted all attempts at cure, reveals many times a condition of multiple gut diverticula, which diverticula may or may not have progressed to the stage of acute diverticulitis. A meal of bismuth and a study of the whole of the intestinal tract by X-ray will, in a large number of cases, reveal not only one but several diverticula appended therefrom. Surgical intervention for the removal of one operative diverticulum is oftentimes attended by the discovery of other diverticula that have not become infected, and which appear only as out-pocketings of a gut-wall apparently normal in structure. Indeed, so frequent is the occurrence of these non-pathologic diverticula, both in association with and independent of acute diverticulitis, that it is impossible to long

*Read before the Chicago Academy of Medicine.

ignore the fact that it is upon the non-pathologic diverticula rather than the surgical type that we must center our attention if we would find the fundamental cause of diverticulitis itself.

The cause of diverticulitis has thus far been sought in the pathologic area of the gut affected. The etiology of diverticula has been theorized according to the clinical conditions present in the special case involved. Thus we see that one author, having a case in which the diverticulum was much inflamed, states: "It is an inflamed condition of the gut that weakens its resistance and thus gives rise to diverticula." Considering only one type of diverticula, and that the surgical type, it is perhaps natural that the observer should fix his attention upon the infection and inflammation that ordinarily attend such cases, and attribute the diverticula to these conditions. Since the non-surgical type of diverticula must also be considered, however, gut inflammation can never be seriously considered the fundamental cause of these structures.

Another observer notes that the diverticula under his observation lie at the mesenteric attachment of the intestine. Concluding from their clinical aspect to their etiology, he puts forward the theory of the venous sheaths. In substance, this theory holds that diverticula of the gut occur only where large blood-vessels enter the bowels, and that the diverticula are caused by the protrusion of the mucosa into the venous sheaths. The vulnerable point in this theory lies in its premise. Diverticula do not occur only where large blood-vessels enter the bowels, nor are they in any way confined to the mesenteric attachment. They may be found in any portion of the intestinal tract, and are often entirely unrelated to large blood-vessels. This fact alone presents an insurmountable objection to the theory of the venous sheaths.

Still another theory as to the etiology of diverticula is that they are merely accidental structures. This theory shows so little real thought that it might well be ignored, were it not for the fact that it is widely credited. To term any structure "accidental" is merely to dodge the issue. To term diverticula "accidental" is not to solve the problem of their cause, but to discard it. Diverticula can never be explained as mere accidents. The frequency of their occurrence, the course of their development, and the evolutionary history of the gut itself, all preclude this possibility. No structure occurring time and time again in the same anatomic area, showing the same progressive stages of development, and having a fixed mode of communication with the tract from which it springs, can be other than the certain effect of some certain cause.

The theories just mentioned reveal the futility of endeavoring to determine this cause through a study of the clinical conditions of diverticulitis alone. Clinical conditions are variable factors, just how variable is well indicated by the varying conclusions arrived at by those who are led by them. As guide-posts to the fundamental cause of diverticula they have proved themselves worthless.

In all cases of diverticulitis there are two causative agents to be considered: first, the cause of the pathologic condition in the diverticulum; second, the cause of the diverticulum itself. A careful recording of histories and findings in more than one hundred cases of surgical diverticulitis on the author's service makes very apparent the fact that the infected

condition of the diseased diverticulum does not at all account for the initial development of this structure. The etiology of diverticulitis is a subject distinct from the etiology of the diverticula themselves. The etiology of the former may be almost invariably accounted for by the same conditions that produce an "itis" in the appendix or elsewhere; the etiology of the latter is apparently not due to gut infection, but to a condition of general gut-degeneration. Since it is essential that a differentiation be made between these two phases of the subject, and since my investigations lead me to the conclusion that the fundamental cause of diverticular development is atavism, I have coined for the designation of the gut-reverting process which results in diverticula, the term, *Atavicosis*. It is with this phase of the subject that this paper is chiefly concerned.

Unless we abandon all theories of evolution and return to the old conception of the human gut as a specially created and perfect cog in a specially created and perfect machine, we cannot study any present day condition of this gut without a like consideration of the antecedents of this gut. Medical science has long since demonstrated the value of histories, not only individual histories, but family histories as well. Nowhere is this more essential than in the intestinal tract. In the individual history of the gut affected, in the conditions and responsibilities devolving upon that gut, and in the history of the long line of progenitors from which that gut was derived, lie the unmistakable sign-posts to the cause of diverticula.

The Mendelian Law is a law that obtains in every portion of the human body, especially in that tract which is, of all the body, probably the oldest and is the most adaptable: the gut. The type of any structure is determined by its heredity plus its environment. The human gut is the primitive gut of antiquity adapted to the necessities of today. To account for diverticula of the human gut we must recognize the potential hereditary qualities retained within this gut and its normal adaptation to present-day needs, as well as the immediate constitutional affections which impair normal function. In short, we must consider not only the clinical aspect of the gut but its modern environment and ancient heritage as well. Recognizing these factors, diverticula of the gut give every indication of being evidences of gut-degeneration: atavism; atavism encouraged, doubtless, by lack of muscular tone in the gut, due to millions of years of the use of concentrated food, and directly brought about by the devolving influences of constitutional diseases. They are in essence the earmarks of gut reversion.

In support of this conclusion, let us examine the gut development of various lower species.

The simplest type of gut is merely a straight tube. Among invertebrates this type of gut obtains in some of the lowest forms of worms; among vertebrates it is found in such parasitic forms as the Hag-fish. Assuming this to be the primitive gut type among invertebrates, we find a conspicuous adaptation of this simple gut in adjustment to the environment of certain worms.

A fairly simple tube marks the land-dwelling earthworms. Living in fairly dry soil, and subsisting upon food which requires moderate gut activity, these forms show a gut whose absorbing area has



Fig. 1.—Uncaecated gut of Earth-worm. Fig. 2.—Diverticular development of mid-gut of marine worm, *Arenicola*. Fig. 7.—Duodenal diverticula of the Perch.

been somewhat increased by means of the typhlosole and which is provided with a few digestive glands. (Fig. 1.)

Passing from the land-dwelling worms to the aquatic worms, we see a distinct adaptation of the gut to large quantities of fluid in the intestinal canal, an adaptation that is accomplished by the development of diverticula. Dissection of numerous marine worms shows a mid-gut thickly beset with diverticula to be typical of these forms. (Fig. 2.)

In the *Aphrodite* (Fig. 3), we see a further increasing of the absorbing area of the gut by the branching of the diverticula.

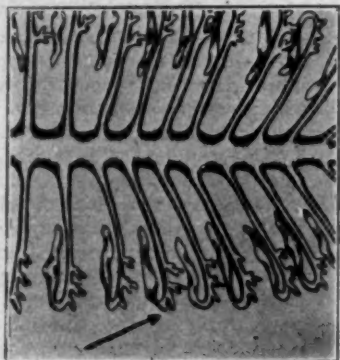


Fig. 3.—Branching diverticula of Sea-mouse.

A thickly-caecated gut is not limited to marine worms. It is found to such an extent among water dwelling forms and among animals accustomed to a liquid diet, that the association between these conditions and diverticula can hardly be overlooked. A gut of this type appears to be the rule among juice and blood-sucking invertebrates. Diverticula are ranged along the whole length of the gut of the leech. (Fig. 4.) Among insects a similar type is seen. Figure five shows the intestine of the common Redbug of the south, that sucks the juice of

the cotton plant. Observe the similarity between this gut and that shown in Figure two. Although one is a water-dwelling worm and the other a land-dwelling insect that subsists upon liquid food, the midgut of each shows similar development, a seeming indication that either liquid environment or liquid food may be instrumental in producing gut diverticula. These appear as nature's customary device for adapting the gut to large quantities of fluid.

It is a long and very uncertain road, however, that leads from the genus homo back to invertebrates, and a discussion of the invertebrate gut in connection with the etiology of diverticula in the human intestine might well be deemed a waste of time were it not that nature is an impartial law enforcer and makes like changes under like conditions whether the form involved be invertebrate or vertebrate.

According to the findings of geology, all vertebrate life of today has sprung from vertebrates that were originally aquatic. The most primitive of vertebrates was the fish. The most primitive vertebrate gut of which we know is still to be found in some of the fishes. The fact of its still primitive organization after millions of years of existence is probably due to the unchanged environment of these vertebrates. "Heredity plus environment." Heredity is intrinsically a stable quantity. When environment remains also unchanged, the organism would naturally show but little variation. Fishes are, therefore, the only known vertebrates that we may depend upon to have retained to any extent their primitive gut development. Living in a liquid medium, the fish has a gut well adapted to its environment and, in many cases, beset with diverticula. In the mackerel numerous blind tubes open into the forepart of the mid-gut. (Fig. 6.) In the perch the diverticula are fewer but larger. (Fig. 7.) These duodenal diverticula in fishes are commonly known as pyloric caeca, but such a designation conveys an extremely inaccurate impression

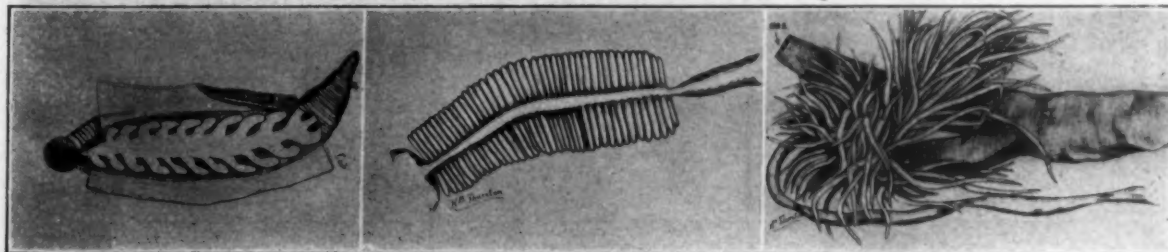


Fig. 4.—Caecated gut of Leech.

Fig. 5.—Mid-gut of common Redbug.

Fig. 6.—Duodenal diverticula of the Mackerel.

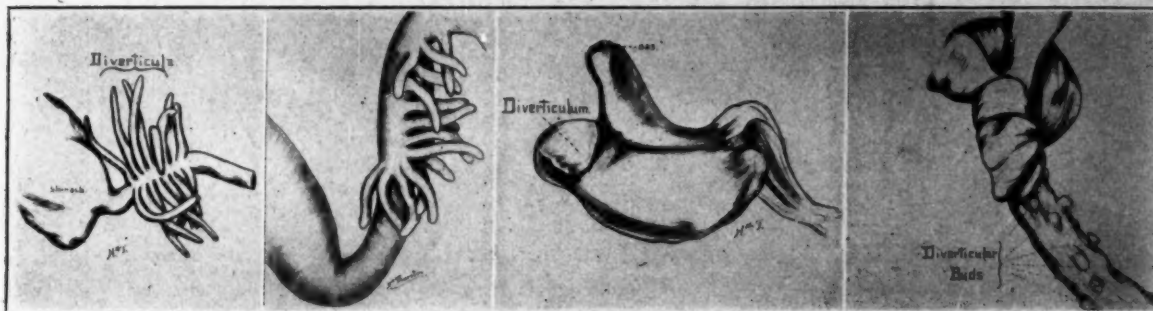


Fig. 8.—Duodenal diverticula of Haddock.

Fig. 9.—Diverticula of mid-gut of Trout.

Fig. 10.—Stomach of embryonic pig.

Fig. 11.—Intestine of embryonic pig.

as to their anatomic position. In the perch they are more truly pyloric than is usually the case. There is a well marked pyloric valve just below that portion of the gut that bears the diverticula.

In the haddock (Fig. 8) the so-called pyloric caeca lie quite beyond the pylorus, and are in fact diverticula of the duodenum showing no relationship anatomically with the pylorus. In the trout (Fig. 9) the diverticula extend for some distance along the mid-gut.

It would be impossible to here enumerate the myriad forms among fishes that show diverticula of the gut. Except for the parasitic fishes who, living upon food that is easily absorbable, have no need of increased gut area, an intestinal tract whose surface has been increased, may be considered the rule among fishes. Increasing of the gut area is sometimes accomplished by means of the spiral valve, but more often we find this result obtained by the presence of diverticula.

If there is any truth in the teachings of evolution, it is back to this old fish-type of gut that we must go in our search for the ancestry of the land vertebrate gut. Hence, the primitive ancestor of the gut of the genus homo was not of the present uncaecled type, but a gut beset with diverticula.

From the foregoing facts we may conclude that the natural heritage of all intestinal tracts of vertebrates is diverticula. The inherited characteristics of the gut have in land vertebrates been overcome to a large extent by the demands of the new environment. It is impossible, however, to overcome permanently, by environment, the heritage of the past. Any degenerating influence, any lessening of

the constant pressure of circumstance, may cause the reappearance of a structure normally long since lost.

Nowhere could this be better illustrated than in the intestinal tracts of certain vertebrates which, having once become adapted to terrestrial life, have again become aquatic. The whale, being a mammal, might reasonably be expected to present the usual mammalian gut. Doubtless, his alimentary tract did, during his terrestrial days, conform to the usual mammalian type. Returning to a liquid medium, however, the gut of the whale has recalled its ancient heritage and converted its potential possibilities into realities. "Stomachs" of varying sizes and number serve to increase to a considerable extent the gut area. In one species fifteen of these "stomachs," which are in fact bilateral diverticula of orangelike shape, are ranged along the gut just posterior to the first and largest stomach. The porpoise shows a similar development to a lesser degree. In the American Manatee we see an adaptation of the stomach proper by the addition of two gastric diverticula. Even the common pig which, while not a water dwelling animal, is accustomed to large quantities of fluid in the digestive tract, possesses a marked diverticulum of the fundus end of the stomach, whose interior surface is further increased by means of a spiral valve (Fig. 10.)

Just what the function of the diverticula may be in different forms is a matter of considerable question. They are thought, by some, to be of pancreatic function, and to secrete juices with which to offset the dilution of the ordinary digestive juices by the water present in the intestine. In spite of several attempts to demonstrate this, however, any

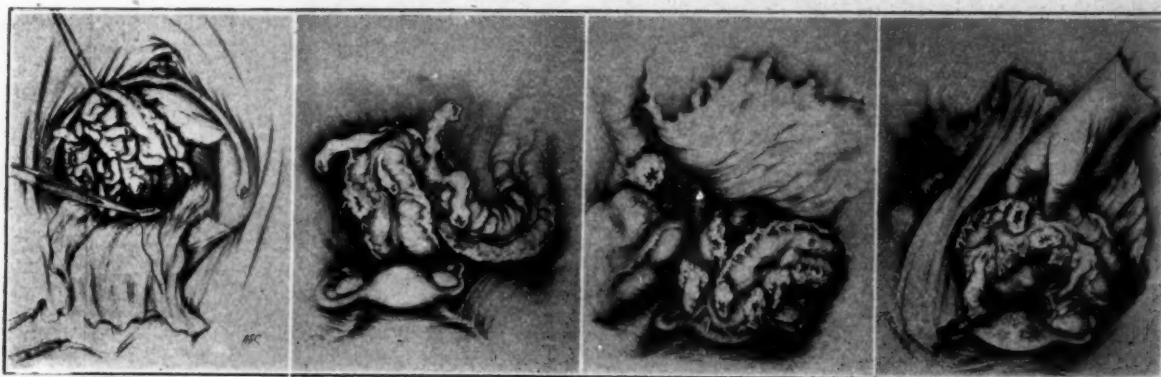


Fig. 12.—Diverticula in the genus homo.

Fig. 14.—Multiple diverticula from sigmoid.

Fig. 15.—One diverticulum springing from caecum; four diverticula springing from sigmoid.

Fig. 16.—Later aspect of case shown in Fig. 15.

pancreatic function of these diverticula remains as yet unproven. By others they are thought to serve as reservoirs for the retention of food until it can be acted upon by the digestive juices. This theory, too remains unproven. In many cases it is obviously untenable since the diverticula, in these forms, obtain their greatest development below that portion of the gut where the greater part of the digestion of food is accomplished. In many cases the diverticula are found to have no apparent contents save bacteria. In the case of the diverticula of the Heteroptera, Glasgow suggests that they may be simply culture places for intestinal bacteria. A study of the types of diverticula and their location in various intestinal tracts would suggest that they do not serve the same purpose in all forms. In many cases they appear to be merely devices for increasing the absorbing area of the gut, and are provided throughout with villi.

The function of the diverticula in lower forms is not a question, however, that need be especially considered here. The point of emphasis in this paper is not the function of diverticula in lower forms, but the fact that there are within all gut walls potential buds of diverticula that may remain inactive or develop as conditions permit. In many mammalian forms, whose fully developed gut shows normally no gut diverticula other than the ordinary mammalian glands, buds of the old diverticula may be found in the intestinal development of the embryo. In Figure eleven the duodenal portion of the intestine of an embryonic pig is shown, having nine diverticular buds ranging along this portion of the gut. This is a small number, however, since several times this number are not at all uncommon. In the human embryo the number is sometimes even greater. Normally these buds disappear during the later developmental stages of the embryo. Potentially they are still retained within the gut wall and may show active development whenever a degenerate condition of the gut so permits. Abnormal gut diverticula would therefore appear to be the outward manifestations of a general condition of gut degeneracy.

As to the fundamental cause of gut degeneracy, it is probable that a number of various causes may contribute to this condition. As has been before suggested in this paper, the histories of the many cases of atavicism under my observation point very strongly to constitutional diseases as potent factors in gut degeneration, particularly tuberculosis and syphilis. While it would be impractical to here introduce histories of a sufficient number of cases to fully establish this point (which histories will be taken up more fully in a subsequent article on the clinical aspect of atavicism), I have appended to this article four typical histories as illustrative of the apparent relationship between the aforesaid conditions.

That the presence of constitutional disease in this class of cases is not co-incidental but causative, appears an entirely reasonable conclusion. No portion of the body is more readily affected by constitutional disease than is the intestinal canal; no portion more readily responds with loss of normal function. Loss of normal gut functioning means gut degeneration. Gut degeneration in the genus homo means atavicism, reversion to the old diverticula. (Fig. 12.)

Cases

CASE 1. (FIGURE 12.)

Female, 28 years old, single, white, school-teacher.

History. (Family.) Father and mother both living, and in fair health. Tubercular history on father's side for three genera-

tions. Father's grandmother, mother and sister died of tuberculosis. Father tubercular in youth.

(Personal.) Patient had usual diseases of childhood. At about five years of age, diagnosis of tuberculosis was made and patient was sent to country where she lived an out-of-door life.

Chief Complaint. At about six years of age patient had an acute belly which persisted for several weeks. Following this attack of acute belly, patient had acute exacerbations which persisted for several months; alternating constipation and diarrhea; several times patient passed from the bowel a considerable amount of bloody mucus. Following this season's exacerbations, patient continued to have a chronic abdomen which persisted with varying intensity until operation.

Fluoroscopic Examination showed the following: The upper part of the gastro-intestinal tract, normal. Transverse colon and sigmoid were found to be adherent and fixed to the lower abdominal wall. A pouch-like diverticulum was observed, springing from the lower portion of the descending colon and passing downward over the brim of the pelvis.

The bowel was then thoroughly evacuated and observation made, fluoroscopically, daily for three days. The barium was observed in the aforementioned diverticulum and in two other diverticula which seemed to spring from the transverse colon.

Laparotomy was made.

Findings at time of operation: One large diverticulum springing from the lower portion of the descending colon on the outer aspect and extending down well into the pelvis. This was removed. Four smaller diverticula were found, which had previously ruptured, springing from the sigmoid, and three unruptured diverticula, springing from the transverse colon. All were removed. A well-marked tubercular peritonitis was present. Appendix was normal. Patient made an uneventful recovery.

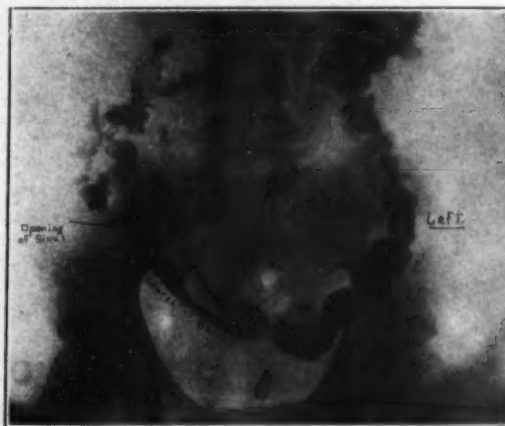


Fig. 13.—Bifurcate diverticulum from lower portion of descending colon.

CASE 2. (FIGURE 13.)

Male, age 16, white, student.

History. (Family.) Father and mother living and in good health. Family and personal history of specific disease negative.

(Personal.) No history of any constitutional complaint could be elicited. Patient had usual diseases of childhood. Gave a history of a chronic belly since childhood.

Chief Complaint. Patient had been operated for acute appendicitis eight months previous to present examination; appendix removed. The appendix upon examination had been found free from pathology other than peritoneal irritation. Drainage was established at time of appendectomy; one cigarette drain was placed well down in the pelvis, another up towards the liver. The wound continued to drain a large amount of pus. Five days after operation fecal matter was observed in the discharge. This continued for eight months, at the end of which time the case first came under my observation.

X-Ray Investigation. At date of present examination a thorough X-ray investigation was made. A diverticulum was observed, fluoroscopically, apparently at the brim of the pelvis, left side. Two days later, the intestine having been well-cleaned of barium, the sinus was slowly injected with barium, observation being made fluoroscopically at the time. The barium was observed to pass through the sinus downward and across the pelvis, and to enter the gut at the point where the diverticulum

was previously observed. The barium passed from this point up the descending colon and across the transverse colon.

Operative Findings. The belly was reopened a few days later. At this time a well-developed, bifurcate diverticulum, ruptured, was found growing from the lower portion of the descending colon, extending downward over the brim of the pelvis. Several smaller diverticula, unruptured, were found scattered along the ascending and descending colon.

The peritoneum was well-studded with tubercles.

CASE 3. (FIGURE 14.)

Female, age 26, German, married.

History. (Family.) Father and mother living and in good health. One brother died of tuberculosis at 22 years of age. All other members of family well.

(Personal.) Patient had usual diseases of childhood. At 16 years of age she contracted a specific infection and was treated for same in clinic in Berlin for about one year. She received no further specific treatment until after operation. Menses regular.

Chief Complaint. For five years previous to operation patient had had repeated attacks of an acute belly—sometimes every two or three months and sometimes only once or twice a year. Between attacks patient seemed well—complained little of stomach trouble. Patient was notably constipated and had occasional diarrhea without any assignable cause. Present illness began suddenly when patient was going through acrobatic exercises, and was attended with acute pains in the abdomen, nausea, no vomiting, and high fever, 103 to 104, which persisted.

Operative Findings. Abdomen was opened. At time of operation six diverticula were found growing from the sigmoid, five of which were gangrenous and ruptured. These were removed, as was also the unruptured diverticulum. No further exploration was made owing to the rather extensive peritonitis. Abdomen was closed with drainage. Case made an uneventful recovery. After operation the above history was voluntarily given. Wassermann taken at this time showed positive 4 plus.

CASE 4. (FIGURES 15 AND 16.)

Female, age 32, married, white.

History. (Family.) Little information could be elicited regarding family history. Negative as far as patient knows. Parents both died while patient was a child—cause of death unknown. Patient has one brother insane—cause undetermined. No other brothers or sisters.

(Personal.) Usual diseases of childhood. At about twelve years of age patient began to be troubled with diarrhea, lasting from two or three days to two weeks' time. This diarrhea seemed to be seasonal and occurred about four times a year. Following diarrhea patient was usually constipated. Patient cannot remember when she did not have cramps in the abdomen immediately after eating. Has always had chronic headaches, and occasionally vomits after eating. During her menstrual periods, which are always painful, nausea is markedly increased. For three months previous to operation patient experienced a great deal of distress upon taking food.

Fluoroscopic examination was made, which showed fixation of the transverse colon, the sigmoid, and a large portion of the ileum in the pelvis. No mass, however, could be palpated. After complete catharsis extending over three days, further fluoroscopic examination was made and several well-defined shadows observed in the pelvis, and one in the ascending colon.

Operative Findings. An exploratory laparotomy was made. Five diverticula were found—one projecting from the caecum and four from the sigmoid. Three had been ruptured. One unusually large diverticulum, springing from the sigmoid, extended well down into the pelvis. The diverticula were removed.

No history of specific disease could be elicited in this case. Wassermann, however, which was not made until after operation owing to acuteness of attack, was positive 4 plus. Subsequent history of patient is that of paresis.

Summary

1. Diverticula of the gut are far more common than is ordinarily supposed. They are productive of many intestinal disturbances commonly attributed to other causes. The fundamental cause of diverticula is, therefore, a problem of much importance.

2. The cause of diverticular development has thus far been sought in the pathologic area of the surgical type of diverticulum.

3. But the surgical type of diverticulum is not the only type to be considered. Surgical intervention for the removal of one operative diverticulum is

oftentimes attended by the discovery of other diverticula that have not become infected and which appear only as out-pocketings of a gut-wall apparently normal in structure.

4. Since these appear as the forerunners of acute diverticulitis, it is upon this type of diverticulum that we must center our attention if we would find the fundamental cause of diverticulitis itself.

5. In all cases of diverticulitis there are two causative agents to be considered: first, the cause of the pathologic condition in the diverticulum; second, the cause of the diverticulum itself. Extensive investigation indicates that the itis of a diseased diverticulum does not at all account for the initial development of this structure.

6. Since it is essential that a differentiation be made between these two phases of the subject, and since my investigations lead me to the conclusion that the fundamental cause of diverticular development is atavism, I have coined for the designation if this gut-reverting process the term *Atavicosis*.

7. The theory that diverticula are the resultant conditions of atavistic degeneracy of the gut is based upon:

(a) The general truths of the Mendelian Law: the human gut's normal adaptation to present day needs; the potential hereditary qualities retained within the gut.

(b) Consideration of the devoluting influence of constitutional diseases.

8. Facts of comparative anatomy indicate that the present day human gut was evolved from an ancestral gut beset with diverticula. Thus the natural heritage of all human intestinal tracts is diverticula. In the normal gut, the gut that is actively responding to the demands of environment, the diverticula are present only potentially. In the degenerate gut, the gut which through disease has lost its responsiveness to environment, the hereditary diverticula attain active development. Loss of normal gut functioning means gut degeneration, reversion to the old diverticula.

9. Our ultimate problem in determining the cause of diverticula, therefore, is to determine the cause of general gut degeneration.

10. The histories of more than one hundred cases of atavicosis on the author's service lead him to conclude that constitutional diseases, particularly tuberculosis and syphilis, are potent factors in this type of gut degeneration.

25 East Washington Street.

The Choice of a General Anesthetic in Proctologic Surgery.

W. Oakley Hermance, of Philadelphia, at the last meeting of the American Proctologic Society considered the peculiar relation which the sphincter muscles have to anesthesia, citing the interference with complete narcosis, rise in blood pressure, etc., which divulsion produces. Proctologic surgery necessitates working through these most irritable and sensitive muscles, and therefore involves unusual difficulties of exploration and operation. He said that these are greater under local than under general anesthesia, and therefore pleaded for less and ambulant treatment of rectal cases.

He reviewed the merits and demerits of various forms of anesthesia, pointed out in particular that there are many more fatalities from nitrous oxide, alone and in combination with other agents, than are ever reported, and cited authorities in support of his statements. From his own and other statistics he concluded that ether of proven quality, given by the open drop method, is the safest and best anesthetic, and finally pleaded that proctologic surgery should be done under such anesthesia, and in hospital surroundings where the best facilities are found for operative work and handling post-operative accidents.

Relapsing Influenza*

Attending Physician, St. Vincents and Bellevue and Allied Hospitals (Fordham Division)

THOMAS F. REILLY, M.D., F.A.C.P.

New York

During the past winter there have been so many cases of long continued fever in influenza, that it seems proper to call attention to their clinical history. This year influenza has been more widespread than in 1918, but has been very much milder, in many features approximating the epidemic of 1888-1889, and there have been more of the prolonged cases than in 1918. When one accurately studies the majority of all cases of influenza, even the mildest, a striking similarity is shown to exist.

There is a fever of three and a half to four days' duration, followed by a drop to normal or about normal, where it remains for from twenty-four to thirty-six hours; then there is a slight rise of one-half degree in the milder cases to three or four degrees in the more severe cases. This elevation continues for four days, then drops again. In the vast majority the elevation is so slight and the peaks are so irregular that it is not noticed and the patient is allowed to get up and feels well and does not experience any great depression.

If, during this period accurate analysis is made of the mental and physical symptoms, it will be generally found that the four day period finds the patient below par and, one is apt to charge this up to the natural result of an infection. After four days the patient is quite himself again for a longer interval or perhaps is quite as well as before the illness, in others the depression returns for four day periods, for weeks and months and we call it the prostration that persists after influenza. If accurate rectal temperatures be taken in most of these cases slight rises of temperature will be found slight but definite rises for that individual (and rectal temperatures only should be taken). This definite elevation will be found at some time of the day during this so called asthenic period. The patient's complaints are familiar to all, "cannot drag one leg after him, drops into a seat after the slightest exertion, cannot perform any mental work for more than a few minutes at a time," etc. The apparent absence of physical signs to account for these complaints, the supposed absence of temperature and the nervous instability causes this syndrome to be frequently labeled as nervous prostration; the patient continues at his work because of the one or two fairly good days in the week that make him hope he is becoming himself again. A very similar condition exists with regard to the chest symptoms, this elevation of temperature continuing for four day periods for weeks and months, with the accompaniment of cough and expectoration makes it difficult to get away from the diagnosis of typhoid fever and tuberculosis. X-ray of the chest shows nothing but peribronchial thickening, perhaps a few enlarged hilus glands and sometimes slight enlargement of the right side of the heart. The sputa is repeatedly negative. The vidal reaction is not present.

The cases that present painful areas that come and go at varying intervals during the day have likewise this recurring feature. Their similarity in many respects to the pains of encephalitis lethargica is too close

to be merely a coincidence. At the present time we have in the wards of Fordham Hospital three such cases who on entrance presented the chest signs of influenza. After a four day interval (or multiple of four days), they developed typical painful areas similar to those present in the spinal form of encephalitis lethargica, with the four day interval. A similar wave of symptoms is frequently presented in the sleeping type of encephalitis lethargica. The cases of influenza with pains in the abdomen simulating abdominal disease do not recur so frequently as in the other group.

It is customary to say that this recurrence of signs and symptoms in the chest cases is due to our permitting the patient to get out of bed too soon. I have a feeling that that is only relatively so, as this rise occurs just as frequently when for some reason or other the patient is confined to his bed as often as when he is allowed out. The rise in temperature in the bed patients is not often so high of course, but it is quite definite. That there is a greater incidence of pneumonia developing in such patients who have been allowed to get up and go out is not entirely proven. The long continuance of such attacks tries the patience of the sufferer, his friends and his physician. The disappointment written on the face of such a patient and his friends on the day following the remission of temperature and symptoms, when he finds his fever up again, has been experienced by almost every one. It has occurred to us that the psychological effect produced by telling the patient as soon as the diagnosis of influenza (even the mildest form) has been made, that he has *relapsing* influenza, will prepare him mentally for the later course of the disease. A patient who has been told he has relapsing fever and who at that time has the matter explained to him that such recurrence will surely take place to a greater or less degree, is mentally prepared for the good and bad periods. If the word "relapsing" is emphasized and explained, we have found this a salutary procedure in managing influenza patients. The vast majority of the laity confuse a simple coryza with influenza and the term "grip" covers both in their vocabulary. Relapsing influenza like the term Spanish influenza, makes the layman cognizant of the difference between this disease and a common cold.

These cases simulate tuberculosis so closely that only the history and absence of Koch's bacillus serve to differentiate them. Doubtless they will continue to appear and the true tubercular case will be called grip for the next decade, when the pendulum will swing and the diagnosis of influenza will excite as much criticism as such a diagnosis did when it was so commonly made a decade ago when tuberculosis was the ailment present. At a later period some of these cases are termed chronic pneumonia. Almost always when seen for the first time a month or more after the initial attack the diagnosis of tuberculosis is made. The cases that are most difficult to diagnosticate are those presenting no marked evidence of lung involvement a month or so after the initial attack. Some of such cases show considerable renal involvement and a true pyelitis is frequent. This persists for months with continued temperature, mental symptoms, low blood counts, and finally

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almost always get well. In almost all of these relapsing influenzas one or more of these mouth signs of influenza are still present:

- (1) Redness of the anterior pillars of the fauces.
- (2) Stenson duct phenomena (as originally described by the author three years ago) an enlargement of the orifice of the duct, with a scarlet point at the summit.
- (3) Papules on the uvula.
- (4) Sago like granules on the soft palate, and often on the under side of the lip.
- (5) Cyanosis of the lips.
- (6) Hemorrhagic areas in the buccal mucus membrane.
- (7) Red nares or pharynx.
- (8) Red conjunctivæ.

In scarcely any case will all of these signs be present. In nearly all several of these phenomena are present so long as the infection remains in the body. I have found these signs of the greatest help in a doubtful case. They are not absolutely pathogomonic, but after all there are very few signs or symptoms in medicine that are absolutely pathogomonic. The patients presenting continuous chest and renal signs constitute a serious financial problem, because

of the very long continuance of the symptoms. The application of any irritant solution to these red and inflamed zones throughout the mouth and nasal pharynx as well as the vault of the pharynx hastens the disappearance of such inflamed areas. Whether this result is due to a local leucocytitic action or to some other mechanism is impossible to state. Certainly the non-irritant antiseptics, particularly those of the protein silver group, commonly applied do not materially hasten resolution. The 2 per cent silver nitrate solution is perhaps the best for general use. An irritating oil for use by the patient is a valuable adjunct. In some instances potassium iodid (internally in 10 grain doses every 4 hours) has been of service. The protein shock reaction produced by means of intravenous injection of typhoid vaccine of a strength of 10,000,000 or of boiled milk, unquestionably reduces the temperature to a lower level. Two or three such reactions serve to bring it almost to normal. The reaction is frequently quite severe and must in no instance be employed if casts are present in the urine. It requires constant medical attention during the period of reaction and is to be attempted only in a hospital. Change of climate is frequently of benefit but is not available for the average patient.

Implantation of a Part of an Ovary Into a Horn of the Uterus in Order to Preserve the Functions of Ovulation and Menstruation

W. L. ESTES, M.D.

Bethlehem, Pa.

In 1909 the writer read a paper in the Surgical Section of the Medical Society of the State of Pennsylvania on "A Method of Implanting Ovarian Tissue in Order to Maintain Ovarian Function."

This paper was published in the *Pennsylvania Medical Journal*, May, 1910. At that time forty implantations had been done in the clinic at St. Luke's Hospital. Since then over a hundred of these conservative operations have been done.

In order to find out the ultimate results as regards continuing the function of the ovary an attempt was made to follow up fifty of the early cases, all operated more than six years ago. Unfortunately, it was found that most of these operations were performed upon women who belong to the nomadic industrial class and that they had "gone on." The rapid and persistent "turn over" of the immigrant laboring class makes it almost impossible to keep track of former patients. It is utterly impossible to trace them after they leave their registered address.

These fifty cases were taken from the records without any selection or differentiation except that they were all operated by me personally, and that the operations were performed more than six years ago.

Of these fifty cases only nineteen could be found. Of the nineteen reporting, or reported, every one of them had escaped the trying neurotic symptoms which usually occur in a young woman after the sudden loss of both ovaries. All but three had continued to menstruate. Two of them had pregnancies. One aborted, the other went to full term and bore a healthy normal child which is still living and thriving. There was no death

following the operations in the fifty cases, though some of them were in very serious septicæmic conditions when the operation was done. Two cases developed small cysts in the implanted ovarian stroma. These cysts disappeared later and gave very little trouble and required no operation. Of the three cases who reported that they had not menstruated since the operation, one was operated upon for very severe tuberculous salpingitis at the age of thirty-two years. The peritoneal coat of the ovaries was so involved by tubercles that only a very small portion of one of them could be preserved. No nervous or circulatory disturbances followed the operation and the patient regained health, strength and general well being.

The second patient was thirty-seven years of age. Besides gonorrheal infection of the tube, her ovaries were very badly involved in a general suppuration in the pelvic cavity and only a very small portion of one of them could be saved.

The third patient was twenty-three years old at the time of the operation. She had already had two operations performed. One tube and ovary had been removed. The remaining tube had a gonorrheal infection and the ovarian stroma was almost entirely destroyed by cystic degeneration. There were dense adhesions in the pelvis, everything matted together. This patient did not menstruate and continued neurotic and ailing, though she escaped the "hot flashes" etc., of suddenly arrested ovulation.

I am induced again to call attention to this method of implanting ovaries since it proved so universally successful in preserving sufficient ovarian function to continue ovulation and the avoidance of too early mena-

pause and all the harassing vasomotor and other nervous disturbances which follow the total loss of the ovaries. Besides, if only two pregnancies have followed the operation in nineteen women, two of whom have never married (and it is probable that more have occurred since so few of the women have been found to give their subsequent experiences), the result is better than any other one so far reported.

At this period in medicine, endocrinology explains all physiologic functions. It is now a well known fact that the ovary produces the human egg and also supplies a hormone of great efficacy in the interrelations of not only the generative apparatus, but of nutrition generally. It were idle therefore, to argue the propriety, indeed the necessity of preserving even a small portion of an ovary whenever it is necessary to sacrifice most of these organs, because of disease, if a portion is found in fairly good condition.

Conservation of ovarian stroma is now the bounden duty of every surgeon, who must operate upon a young woman's internal generative apparatus, when it is at all possible. The argument of this paper is that it is possible in many cases formerly considered hopeless, as regards the continuing function of the ovaries, to save sufficient stroma of one or both ovaries.

It is a well recognized fact that menstruation, and possibly most of the physiologic phenomena grouped under the term "ovulation" will continue if even a small portion of one ovary be retained, or be transplanted within the blood and lymph circuit of the abdominal cavity. Grafts of ovarian stroma placed in the broad ligaments or even in the abdominal walls will serve to continue menstruation. It is not so sure, however, that grafts so placed will serve equally as well to prevent the very trying nervous phenomena of sudden premature loss of the ovaries. Nor can it be proved, barring Robert T. Morris' remarkable case, that auto or heteroplastic grafts of ovaries are followed by subsequent pregnancies and normal labor.

Physiologists and clinicians are able now to differentiate certainly two qualities in ovarian function, namely, the genetic and the purely hormone qualities. Whether the vaso-motor and sympathetic nervous irregularities and storms after complete oophorectomy in young women are due to loss of the hormones or to the loss of the ovulating cycle, is a matter not yet fully determined, and for the purpose of this thesis it does not particularly matter. The all important fact is, if a portion of functioning ovarian stroma be retained in the abdominal cavity, especially if it be retained within the woman's pelvis, menstruation continues, vigor of health and libido is retained and the nervous ailments following sudden loss of the ovaries in youth are obviated. One must revise, indeed he must reconstruct, all his previous knowledge in regard to conception and pregnancies, if it can be proved that conception may take place in the total absence of ova in the uterus (the tubes having been completely removed). He must believe that a functioning ovary may discharge an ovum into the general lymph channels and be carried into the blood current, finally lodged in the epithelial lining of the uterus and there be fertilized. We cannot yet conceive of fertilization in cases where it is totally impossible for ova to reach the interior of the fallopian tubes or horns of the uterus. Endocrinology has not yet gone to the length of claiming general systemic conception and

intrauterine pregnancy from the hormone of the ovary.

Conditions possible for fertilization and pregnancy may be brought about, however, if functioning ovarian stroma be implanted directly over the inner opening of one or both fallopian tubes in the horn or horns of the uterus. This is what is accomplished by the method of implanting ovaries I wish again to describe and to recommend after twelve years of experience in the use of the method.

In regard to pregnancies I make no extravagant assertion or claim. Pregnancy may and has occurred after the operation but in the large majority of the cases it has not occurred. If, however, it should in nineteen cases occur twice, the method being unobjectionable as compared with other operations for retaining a part of the ovary, it is certainly worth persistent use in the conditions for which such conservative attempts are indicated.

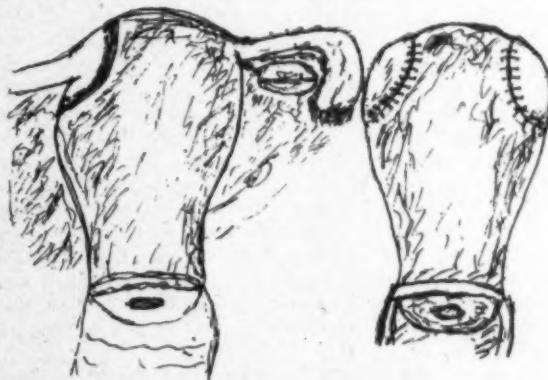
Conditions for Which the Operation Is Adapted.

In women between fifteen and forty-five years of age, who for any reason have had complete stenosis or destruction of the fallopian tubes, the operation is indicated. This is not meant for cases where there is a simple constriction at one place from twisting, flexions or adhesions. This may be remedied without removal of the tubes. Where most of the tube is stenosed and so diseased it would not be safe to retain it, in all sorts of salpingitis, even in cases of gonorrheal or tuberculous salpingitis, when the tubes are hopelessly diseased, but the ovaries are not wholly affected; in the various inflammatory conditions which may invade the pelves of women, and by continuity or contiguity destroy the tubes, the operation is indicated.

The necessity in these implantations is, that the whole of both ovaries shall not be diseased and that the uterus shall be in such condition it may be left in place. I have, however, implanted an ovary in the stump left after a subtotal hysterectomy with perfect success and though of course menstruation did not recur, the phenomena of ovulation did go on regularly.

Technic of the Operation.

In cases in which the necessary slight manipulations are not apt to prove dangerous on account of a possible rupture of an abscess into the peritoneal cavity, after careful bathing and disinfecting the vulva and vagina, the uterus is curetted, swabbed out with tincture of iodine, and packed with iodoform gauze. The abdomen is then opened; after carefully protecting the general abdominal cavity with warm moist towels, while the woman is in the Tren-



delenburg position, the adhesions are broken up, the tubes carefully liberated and all pus and detritus sponged out, and the pelvis dried and packed with gauze towels. The tubes are completely excised from the horns of the uterus by rather a free oval incision which reaches to the mucous membrane of the uterus. As a rule, in pus cases the broad ligaments are so thickened and softened and are so adherent to the tubes that a mass ligature is passed around the outer folds of the broad ligament, outside the tube, and the ovarian vessels tied off. After this, all the involved upper part of the broad ligament is removed with the tube, including the uterine insertion. Frequently it is necessary to cut through the uterine attachment of the round ligament in order to get rid of all infected tissues. Both tubes are treated in like manner.

The ovaries will have been liberated in the separation of the tubes and the evacuation of the abscess cavities. If not fully liberated they should now be freed and carefully examined. Then all the degenerated part of the ovaries should be excised by cutting away if possible the lower unattached part of the organs. The ovarian ligament should be preserved, if practicable, with its small artery, and the attachments to the broad ligaments also, if it can be done without leaving bad tissue behind. This is not essential, however, as completely excised portions of the ovarian stroma may be implanted. The portion of the ovarian stroma which is left is cut in such a pattern that it will fit into the oval concavity left in the horns of the uterus when the tubes are excised. These portions should be successively drawn over, placed with their raw surface fitting into the oval concavities in the horns of the uterus, and fastened in place in the uterine walls by running sutures of No. 1 chromicized catgut all around their edges. The stumps of the round ligaments and broad ligaments are then brought into apposition with the sides of the uterus in such a way that the implanted segment of ovary is entirely covered by the serous membrane of these ligaments. This serves the double purpose of steadying and fixing the uterus in position and protects the grafts from possible adhesions to the intestines or omentum. When drainage is necessary, and it frequently is in these cases, it is made through Douglas cul-de-sac into the vagina, by an iodoform gauze strip packed into the ragged cavity, so frequently left down in the pelvis, or by cigarette drains, or by tubes, and the ends passed through a small puncture into the vagina. This packing or drains may be removed in from five to six days as a rule.

Mauclaire, writing some time ago, in *Archives Generales de Chirurgie*, on the subject of ovarian grafts, recommended anastomosing the ovarian vessel with some others, preferably the epigastric, in doing ovarian grafting. He thinks an assured blood supply is most necessary for success in these operations. Undoubtedly he is right in one sense, for the grafts would surely atrophy and become useless without a proper blood supply. In my method, the blood supply from the uterine anastomoses is never, or very rarely, cut off completely. But even if it is, the ovarian graft, fitting directly into the walls of the very vascular uterus, soon has an established blood supply which is quite adequate for even this organ, which is accustomed to so rich a supply of blood.

Ovarian function is usually established in two

months after the operation, and I have known of only three cases in which it failed during the menstrual period of the woman's life. The uterus does not become abnormally large and there are no specially ill sensations complained of by the woman subsequently.

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VACCINE THERAPEUTICS.

V. D. FARMER, M.D.,

Jackson, Mich.

Since all disease is the direct result of the inharmonious relationship between the fundamental forces which govern the physiological processes. Since most of these disturbed physiological processes are due to pathogenic bacteria, it is most logical and scientific to seek to eliminate from the system those elements which derange organic functions and become the cause of pathological change. This can best be accomplished by utilizing the immunizing defenses of the system, after having determined which organism is causing the disturbance, through the introduction into the poisoned tissues of a large number of the same kind of killed bacteria which will neutralize the poison, destroy the living bacteria and set up molecular or dynamic forces which open the normal avenues of escape and ultimately purify the blood and restore the normal process of waste and repair. The one great factor in the maintenance of health.

I believe the limit of beneficial results has not yet been reached, and it is to be hoped that within a short time a greater number of diseases may be conquered.

To be really successful in giving vaccines requires certain judgment which can only be acquired by clinical experience.

From a fairly extensive experience and observation in vaccine therapy the writer has come to the conclusion that too often failure results, not so much from the vaccines used as to the neglect of the physician to carry out the other necessary measures essential to success. More attention should be given the refinements of technique and the law of immunity. It seems that in many cases a physician begins the use of vaccines with the idea that all that is necessary is to get the vaccine and use it and success must follow as does night the day. I believe that oftentimes vaccines are given with less preparation in knowledge of their use than is given to the subject of the dosage of quinine or mercury.

Given even in this haphazard way, there is no doubt that often remarkable recoveries ensue, but such practice is unfair to the patient, to the physician and to the therapy.

Vaccine therapy is based on two well known factors: (a) That killed organisms when injected into healthy tissues are more dependable and safer agents towards stimulating tissue cells for antibody formation than the live organisms responsible for infective processes, and, (b) That antibodies develop primarily in the course of an infection in the infected tissues and when killed organisms are injected into healthy tissues antibodies are formed by the tissues into which the killed organisms were injected thus exploiting inactive healthy tissues and forcing them to become actively engaged in antibody formation to aid the infected tissues in overcoming the infection.

In the utilization of these factors for therapeutic purposes clinical experience has demonstrated that some rather well defined rules regarding dosage should be followed to obtain the best results.

Antibodies are formed at the site of inoculation. If the tissues are excessively irritated by too large a dose not as much antibody is formed as with less irritation.

To avoid excessive irritation at the site of inoculation it has been found of advantage to divide the dose in three or four different parts of the body. This offers the advantage of producing a minimum amount of local irritation at the site of inoculation and at the same time exploits a larger amount of tissues in becoming activated for antibody formation.

As no criticism is justified that is purely negative I would submit that it would be of advantage to all concerned were the physician, taking up the use of the vaccine, to give more thought and time to the subject of the laws of immunity as we now know them and to a proper technique. True, the last word has not been said, but the therapy has been established long enough to demonstrate; that, given in the dosage found advisable and at proper intervals, no harm has been reported from their use and much good has been accomplished. Some of the measures which ought to at least be borne in mind in the practical use of vaccines cannot, I believe, be too often reiterated. In chronic cases, as a rule, it is unwise to give large doses at the start or too frequent intervals. For some reason, probably that the immunizing forces are fatigued in these conditions, the negative phase is easily induced and the reaction may be sharp—an event unpleasant to the patient and not helpful to his recovery. The dose should be small and not repeated until the positive phase is on, as evidenced by the objective findings of the physician and the subjective sensations of the patient.

In acute infections the opsonic response, as a rule, is prompt. The organism tolerates relatively larger doses and the negative phase, if any, quickly passed, allowing an early repetition of the same or larger dose.

It should be borne in mind that in order for the blood, enriched with antibodies, to conquer infection, it must have access to the offending bacteria. In order to obtain this result it is necessary to overcome stasis and, if possible, produce a hyperaemia in the infected area. In carbuncles, acne and other skin infections, hot compresses or Biers' hyperaemia is indicated. In pneumonia, the indications are to use counter irritation on the chest and to lessen

coagulability of the blood by the administration of citric acid. Pus cavities should be evacuated, etc.

As phagocytosis is one of the important factors in the production of immunity it is often of advantage to administer some form of nuclein in conjunction with the vaccine treatment. It is an established fact that nuclein increases the number of leucocytes and, under the opsonizing influence of the vaccine these leucocytes become increasingly active as phagocytes.

This factor, of an increased leucocytosis, it appears, has not received enough consideration in conjunction with vaccine therapy. In this connection it might be well to also observe that a mixed vaccine induces a greater leucocytosis than one of a single organism. This offers a rational explanation of the fact, clinically observed, that in the early stages of acute infections the best results are obtained with mixed vaccines. It is, perhaps, unnecessary to reiterate that vaccines should be used early in infections and the earlier the better.

In minor acute infections like colds, acute otitis media, slight wound infections, boils, etc., I usually start with a small initial dose about 0.2 mil. or 3 minims of the usual stock suspension, and the dose then increased in accordance with the reaction that developed from the first injection, inoculations also being made at short intervals, from one to three days apart. If 1 mil. doses are given in these cases unpleasant local and constitutional reactions are liable to follow and the clinical results are not so good as when the dose is so gauged that marked reactions are avoided. As a rule, the dose may be increased to 1 mil. within four or five treatments, but if considerable infiltration develops at the site of inoculation it is not wise to materially increase the subsequent dose even if a number of small doses are given in succession. Usually, it is not necessary to work the dose beyond 1 mil.

In chronic infections we have two kinds of reactions from the use of vaccines, focal at the site of infection and local at the site of inoculation. For this reason, I start treatment by giving a small dose and do not repeat until all signs of reaction from the previous dose have subsided, which is usually about a week. More failures from the use of vaccines in the treatment of chronic infections are due to overdosing and giving them at too short intervals than from all other causes combined. The writer is frequently consulted for advice in the treatment of cases that do not progress favorably, and almost invariably it is found that too large doses were employed, the vaccines were given at too short intervals, or both. The best immunizing responses are obtained if only a slight reaction develops at the site of injection, the infiltrated area not being longer than the size of a silver dollar. If an inflammatory area develops three or four inches in diameter the tissues at the site of injection appear to be severely taxed and consequently not so capable of antibody production, a condition similar to that which prevails in an infection, but by gauging the doses to produce a moderate reaction the maximum immunizing response is obtained. As long as this fundamental condition for producing immunizing response, from the hypodermic use of bacterial vaccines, is not recognized in the treatment of chronic infection, by the practicing clinician, the best results from the use of vaccines will not be obtained.

Since we have extensive acute infections, minor

acute infections and chronic infections to treat, it necessarily follows that in the intermediate varieties the dosage and intervals between inoculations should also merge from the extreme to the intermediate conditions. Knowledge to apply this proper adjustment of dosage and intervals between inoculations to suit the individual case can only be obtained by clinical experience. Many physicians employ vaccines and obtain no results in a given patient. This same patient may go to some other doctor, who will treat the patient with the same vaccine, but by carefully adjusting the dosage to the particular requirements of this particular case, effect a cure. Such cases have come under my personal observation. We must have general rules to go by, but the details must be worked out by the attending physician. This is where experience coupled with good judgment and careful clinical observation counts and the doctor who has not had good results from the use of bacterial vaccines may well reflect and inquire whether he has employed them to the best advantage, and carefully noted all conditions.

In my experience the results of vaccine therapy have been highly satisfactory and I can record no unpleasant developments following their use. Using stock bacterins in the treatment of erysipelas, furunculosis, influenza, chronic bronchitis, broncho-pneumonia, rhinitis, sinusitis, follicular tonsillitis, arthritis, gonorrhea and other everyday infections I have observed improvement and cure in so many instances that they are not to be accounted for through either psychological influence or spontaneous improvement.

TREATMENT OF MAXILLARY SINUS INFECTIONS.

MARION E. PIRKEY, M.D.,

CLINICAL ASSISTANT, EYE, EAR, NOSE AND THROAT,
UNIVERSITY OF LOUISVILLE,
Louisville, Ky.

The treatment of antrum infections calls for special care in irrigation. Nothing should be used that would in any way interfere with free drainage or produce irritation to any of the tissues with which the irrigating solution might come into contact. I have recently had very satisfactory results in antrum irrigation with solutions of dibromin.

From laboratory tests this agent shows high antiseptic and germicidal value even in weak solutions. I have used it in purulent accessory sinus conditions on account of its antiseptic value and low toxicity. In solutions up to 1:5000 it has shown no toxic absorption symptoms, nor any local irritation. Its use in chronic purulent conditions has been followed by a lessening discharge, and in the cases in which free drainage was obtained, by a cessation of the purulent process. The infections were held under control and the normal processes of healing were not interfered with.

I have treated ten maxillary antrum infections of short duration by puncture and irrigation with 1:10,000 dibromin solution, resulting in the prompt cessation of discharge and relief of symptoms. There was no more reaction from its use than in irrigation with normal saline. Its beneficial action, however, was more rapid than similar causes irrigated with the normal saline. In the cases in which it was used, pain usually was relieved by the first irrigation, the

swelling and discharge subsiding sooner than other cases in which no antiseptic was used.

In the chronic cases it was of slight benefit unless its use was combined with appropriate surgical treatment.

Out of the total of twenty-one cases in which I have used Dibromin the following are illustrative so far as the general symptoms presented, treatment applied and results are concerned.

CASE NO. 1.

Mrs. L. K. C. Age 32. Female. Married. Gave a history of purulent nasal discharge attended by pain over right maxillary antrum, extending over a period of six months. Diagnosed as abscess in right maxillary antrum. Pain, tenderness and swelling over right antrum, and slight nasal discharge. Pus in middle meatus, antrum dark on transillumination. Treatment: Antrum punctured on January 1, 1921. Large amount of pus discharged, and irrigated with 1:20,000 solution dibromin. Pain and discomfort lessened. This was repeated for four days with relief of the pain and disappearance of the swelling, but the discharge continued. Two weeks later a Caldwell-Luc operation was performed under ether. The after treatment consisted of an irrigation of dibromin solution 1:5,000. Discharge ceased after one week, and the patient is now apparently well. No irritation was noticed in this case and the dibromin solution apparently assisted in the early recovery.

CASE NO. 2.

Miss B. S. Age 20. Female. Single. Stenographer. Gave history of purulent discharge from right side of nose for several months. Antrum tenderness. X-ray shows pus in right antrum, other sinuses negative. Purulent nasal discharge and pain. Pus presenting right middle meatus. Antrum dark on transillumination and positive x-ray, showing purulent infection of right maxillary antrum. Treatment: Local treatment was negative. Antrum was punctured and washed out several times without benefit. Permanent intranasal opening made under ether, followed by irrigation daily with solution of dibromin 1:20,000 to 1:5,000. The discharge lessened on the third day and ceased on the seventh irrigation. The irrigations were repeated three or four times afterwards. There was no recurrence of the discharge after one month.

Summary.

In the early development of antrum infections dibromin solution appears to be the ideal agent for irrigation. Its germicidal properties soon renders the field of infection sterile. There is nothing about the preparation that seems to irritate the tissues which soon return to a normal state. In the sub-acute or long standing cases results are not so prompt, neither is this to be expected as structural changes in the tissues may lessen the opportunity for rapid recoveries. However, where proper surgical measures are applied, together with consistent application of dibromin solution, most of these cases continue to improve from day to day and eventually are cured although some of them have persistently resisted other treatment.

The Standard of Cure in Gonorrhea

Clarkson says higher standard of cure than that which formerly obtained is needed. He formulates such a standard in this paper consisting of a course of provocative treatment and final tests for male and female.

Scheme for final tests for males includes inoculation of culture tube with secretion from urethra, examination of urine, examination of prostatic and vesicular specimens after careful prostatic massage, and an additional urethroscopic examination. Complement fixation test should be used in metastatic gonorrhea.

Scheme for final tests for the female includes inoculation of culture tube with secretion from urethra, examination of specimen from ducts of Skene and Bartholin, examination of urine, inoculation of culture tube with specimen from cervix after being subjected to some sort of massage.

Owing to the greater tenacity of gonorrhea in the case of women author finds it inadvisable to discharge a woman as cured after two or three tests. If she has passed these no treatment should be given for two or three months; then after another provocative course, a second series of tests should be made.—(*Brit. Med. Jour.*, September 24, 1921.)

PRECAUTIONS TO BE TAKEN BEFORE TONSIL OPERATIONS.

HAROLD HAYS, M.D., F.A.C.S.
New York

The best evidence that the tonsil operation as performed today, is devoid of danger, is that when it is performed by a competent surgeon, under general anesthesia, in a well-equipped hospital accidents and deaths, arising from this operation, are so few that they can be counted on the fingers of one hand even in the large hospitals where thousands of operations of this kind are performed each year by indiscriminate operators. For example in an analysis of some thousands of such cases, operated upon at the New York Post-Graduate Hospital, it was stated that there had been only three deaths in a number of years even when the operations had been performed, in a number of instances, by students who were first learning nose and throat work: and the statement is further substantiated by the report of Coakley and Pratt, at the New York Academy of Medicine last year, when it was shown that in nine hundred and some odd cases, there had been no deaths.

However, it is always wise to take precautions, even when the danger is practically nil. The chief consideration should be given to the physical condition of the patient. Many times the tonsil operation has to be performed on a child whose physical condition is below par but nevertheless, one should be aware of this fact so that he will be able to determine the resistance of the patient far better, than if no thorough physical examination had been made. The urine and the heart should surely be examined in every case; and in order to make assurance doubly sure, every child should have the advantage of a coagulation test of the blood before operation.

One often asks whether the test of the blood for coagulation time really has any value because it is so inconsistent. Be that as it may it is always wise to make the test and feel assured that if the coagulation time is within the normal blood limit, there is practically no danger from hemorrhage at the time of operation. On the contrary, if the child's coagulation time is prolonged, it is only too easy to delay a few days or a few weeks, if necessary, to bring that coagulation time up to the proper limit. Coagulation tests will vary considerably. A test which is taken from a pinprick of the finger or of the ear or of the toe, will show a considerable variation at certain times, and this variation will be further shown when blood is withdrawn from the arm and the test made in this way. The simplest test is to prick the finger and compare the coagulation time of a drop of this blood, on a glass slide, with that of a person whose coagulation time is normal. However, the only exact coagulation test that one can make is to withdraw the blood from a vein in the arm similar to the method used for the Wasserman test. In every case, where the coagulation time is prolonged, it is wise to attempt to bring back the time to the normal by the administration of some salt of calcium. It has been the custom in our office to make coagulation tests on every patient who is to have a tonsil operation performed, and as an additional precaution, regardless of whether the coagulation time is normal or not, every child is given 10 gr. of calcium lactate three times a day for three days before operation, and every adult 15 gr. It has seemed to us that the calcium lactate has a marked beneficial effect upon the bleeding after the operation and we are yet to encounter the first hemorrhage of a serious nature.

2178 Broadway.

THE IMMIGRANT AND THE HEALTH OF THE NATION.*

ANTONIO STELLA, M.D.,
New York.

History is ever repeating itself. Throughout the centuries there has always been discrimination against the foreigner. Whether he comes as a conqueror or as a peaceful settler, he never has quite the same prestige as the native element.

When the Germans and the Irish were pouring into America during the period between 1820 and 1850, people raised their voices against the worthless foreigner.

We cannot see the possible results except through an intelligent faith, and people are saying precisely the same things about the newer immigrants that have always been said about the intruding foreigner. We are exceedingly short-sighted. History should teach us vision. As it has been with past migrations, so we may expect it to be with the present. The historian of five hundred years hence, who will have the effects of this migration under his eyes will, without a doubt, give recognition to the valuable contributions of recent immigrants to American life.

And I know of no more enlightened body than this association of jurists and physicians, before whom to bring for appropriate and competent discussion the case of the immigrant in his relationship to the physical and moral health of the nation. I advisedly say *physical and moral health*, because, in my mind, the two constitute one inseparable unit, the abnormalities and deviations of the latter being often nothing else but the manifestations of the abnormalities of the former.

For, while the theory of the pathology of crime, as to the significance of certain physical signs found in criminals, may have been overworked, there is no doubt that a correlation necessarily exists between the moral character and the physical constitution of the individual, or to be more precise, the individual's histological organization, endocrine constituents, the composition of his blood, of his nerve fibre and the functioning of his organs, as all physiological actions, emotions and reactions must be recognized as largely the result of molecular phenomena.

While this principle is probably true in all cases, I feel it is particularly so in the case of the foreign born descendants in America, where very definite and potent factors are at work in the new environment, acting simultaneously, and at variance from heredity, upon the constitution of the new generation.

I feel, therefore, that the responsibility for such somatic and psychic changes, in the resident alien population in the U. S., be they for better or worse, rests entirely with the community where they are produced and not with the land whence the immigrant came.

I wish to make this distinction clear at the outset, since a great deal of confusion seems to exist in the mind even of the best informed, that whatever amount of disease and crime is charged against the foreign born, it is indiscriminately attributed as much to the newcomer (immigrant aliens) as the old immigrants and to their children (resident aliens).

*Address delivered before the Society of Medical Jurisprudence at the New York Academy of Medicine, February 13, 1922.

We forget that conditions are entirely different in the two groups, and that there are very definite centripetal and centrifugal forces to be estimated and allowed for in the latter that do not exist in the former.

In this manner there has been created a widespread conviction in a large part of our population that immigrants from southern and eastern Europe are bringing all sorts of diseases and crime to the United States. Of all classes the Italians bear the brunt of the charge, with the Poles, the Greeks and the Slav close seconds; while the immigrants from the north of Europe (Ireland, Scandinavia, Denmark and Germany), who are really those who weigh more heavily in the scales of the nation's mortality and dependency, seem to enjoy a rather favorable reputation.

That such misconceptions are not confined to the ignorant class alone, but are often shared by the leaders of thought, can be proven by reading the following statement in J. D. Whelpey's book: "The Problem of the Immigrants."

At page 16, this conservative and well-informed writer, after declaring "that the United States Immigration laws and restrictions are severe and thoroughly and intelligently enforced," says:

"There is, however, the danger of disease, one not to be lightly regarded. There are many afflictions of the body common to the peoples of Southern and Eastern Europe which are comparatively unknown to other and cleaner peoples. One of these, trachoma, that dread and disabling disease of the eyes, Egyptian ophthalmia, as it was formerly known, when introduced into Italy by Napoleon's army, is prevalent in that part of the world from which a large number of people are now emigrating.

"Serious plagues of disease are always a possibility in countries to which large numbers of emigrants are floating.

"In the great rush of people to new lands, the criminal, the pauper, and the deficient escape close scrutiny, and bring their evil intentions or afflictions with them to fresh fields."

The recent hearings before the Senate Immigration Committee, revealed likewise the same measure of ignorance and prejudice against the immigrant. Through misinformation spread by class interests, which has filtered down through the different strata of society, the antagonism has been exaggerated and has been accepted. Inspired always by labor interests, many cities and some states have long forbidden or restricted the employment of aliens in public work and have even sought to limit their employment in private undertakings. By lurid criticism, American labor organizations have aimed to secure national legislation restricting the coming of such immigrants, especially from southern Europe.

I hope that the facts which I shall relate and present to you for consideration will be of service in the establishment of truth which must be at the base of a sound public opinion.

It is absurd to believe that a great many diseased aliens are passing the rigid barriers of inspection at Ellis Island and infecting our country. Persons making such assertions, either do not know the law, or are irresponsible or else are deliberately charging the U. S. Public Health Service and the Department of Labor with neglecting their duties. Such is not the case, as deportation figures will show.

All aliens afflicted with disease are not admitted until cured at Ellis Island, if they are destined to the proper parties, entitled to make petition for hospital treatment. Such treatment is given at the expense of the steamship company or the oldest relative. When cured, such a person is admitted, but if the disability was such as to make that person

liable to become a public charge, the period of admission is temporary, and a bond of \$500 must be furnished.

Permit me to recite briefly the list of classes of persons who are not permitted to enter this country:

Mental.—Idiots, imbeciles, feeble-minded, epileptics and insane people, or those suffering from any constitutional psychopathic inferiority.

Moral.—Persons who have been convicted of felony or crime or misdemeanor involving moral turpitude, polygamists, or those who believe or advocate it. Prostitutes or persons receiving any revenue therefrom, coming for that or any other immoral purpose.

Physical.—Chronic alcoholics or those afflicted with tuberculosis in any form or with a loathsome or contagious disease or otherwise physically defective in a way that may affect ability to earn a living.

Political.—Anarchists or persons who believe in or advocate overthrow of the government by force or violence, or who are opposed to unlawful destruction of property or are members of or affiliated with any organization entertaining these ideas.

Economic.—Paupers, professional beggars, vagrants, or persons likely to become public charge.

In addition there are two other special requirements usually referred to as the contract labor law, and the literacy test.

Industrial.—Contract laborers or those who have come in consequence of advertisements for laborers.

Educational.—Persons who cannot read a language (unless coming here to avoid religious persecution or unless father or grandfather over fifty-five, wife, mother, grandmother, unmarried, or widowed daughter of a resident alien.

Medical Inspection of Aliens.

If the law is properly enforced, it should, therefore, be accepted as an axiom that the medical inspection of aliens bars automatically all unfit and undesirable. The obviousness of this statement does not detract from its importance. During the fiscal year ended June 30, 1921, there were examined by medical officers of the Public Health Service 1,137,682 immigrants for the purpose of detecting physical or mental defects or diseases, as provided for in the United States immigration laws. This number of immigrants, as compared with 762,127 for the previous year, shows an increase of 375,555. In addition to the immigrants examined, there were also inspected 851,928 alien seamen, as provided for in the act of February 5, 1917.

The total number of aliens certified having defect or disease was 46,870. Of the alien seamen found afflicted, there were 92 certified for tuberculosis or mental conditions; 4,714 as being afflicted with either loathsome contagious diseases or dangerous contagious diseases (including trachoma, gonorrhea and syphilis); 1,793 for conditions that would affect their ability to earn a living and 492 for minor defects. Of the alien passengers certified 730 were found to be suffering either with mental defects or tuberculosis; 2,451 as being afflicted with loathsome contagious or dangerous contagious diseases; 28,350 as having some physical defect which would interfere with their ability to earn a living, and 8,248 for minor physical defects. The number certified was an increase of 21,761 over that of the preceding year.

The number of officers assigned to the medical inspection of aliens has varied during the year, but on an average some 90 officers were exclusively engaged in this work, and in addition a number of officers at marine hospitals and quarantine stations also performed medical inspection of immigrants. Service officers at American

consulates at a number of foreign ports made medical examinations of prospective immigrants in order that the latter might be appropriately advised as to any condition which might operate to their exclusion upon arrival at a port of the United States. The performance of this examination at the port of embarkation in a certain number of cases served to prevent the embarkation of mentally physically defective persons who would have been subject to deportation upon arrival at the United States, and thus these people were saved the expense of the trip, with other unnecessary hardships. Steamship companies were also enabled, through this examination, to avoid penalties provided in the United States immigration law against common carriers for bringing to the United States ports aliens suffering from certain specific mental or physical defects.

At Ellis Island, port of New York, there has been a progressive improvement during years past in the facilities afforded for the examination of aliens, and also in the methods employed in the examination. Many aliens, however, notably those arriving first and second class, as well as alien seamen, are examined on board vessel. (I have purposely quoted "ad litteram" the Surgeon General's words (see Report of 1921), so as to avoid any biased comment.)

In view of the known prevalence of infectious diseases in Poland and Russia, and the lack of information as to their absence in certain countries situated east and south of Germany, Switzerland and Italy, including Asiatic and African Mediterranean or Black Sea ports, it was deemed advisable to consider steerage and second-class passengers originating therein as having been definitely exposed to typhus exanthematicus and smallpox, and to impose against all departures from those countries the minimum requirements of delousing and vaccination. The wisdom of this measure was fully confirmed during the fall and winter of 1920-21 upon the arrival at New York of vessels from Trieste, Rotterdam, Antwerp and Danzig carrying cases of typhoid fever among emigrants from these countries.

Constant contact is maintained between the bureau of the U. S. P. H. Service and the Paris office, by letter and cable on the one hand, and between the Paris office and the medical officers and consuls on the other, and the enforcement or relaxation of the necessary measures are adequately adjusted and immediately transmitted to the various officials concerned.

At the commencement of the fiscal year service officers had been stationed at only a few ports, such as Naples, Rotterdam and Danzig—the stream of emigration, released from passport difficulties, was just getting under way.

By personal inspection of ports and contact with transportation managers, the latter had been advised personally, as well as officially through the respective consuls, of the necessity of providing facilities for delousing, vaccinating, and the inspection of the emigrants proceeding in large numbers from typhus-infected countries to the United States. In accordance with these instructions, hotels for their reception were leased or constructed, and bathing, disinfection and inspection facilities were installed. Hotels known as "clean" hotels were provided for their accommodation whilst awaiting embarkation subsequent to delousing.

Although when typhus and plague subside in Europe, the menace of the vermin-bearing immigrant will practically disappear, still the U. S. Public Health Service will continue to insist that travelers to this country must be reasonably clean when they embark, regardless of any infection to which they are known to have been exposed.

At present, with the reduction in immigration brought

about by the existing law restricting their numbers, and with the disinfecting and delousing facilities that the steamship companies have installed at European ports, conditions are satisfactory.

Dr. Howard A. Knox, assistant surgeon in the U. S. Public Health Service at Ellis Island said, some time ago, that only aliens who can pass a physical examination equal to the minimum requirements for enlistment in the U. S. Army should be admitted to this country. And that is exactly the kind of rigid examination immigrants of both sexes are subjected to.

Those who are fearful, that some feeble-minded and idiots might escape the scrutiny of the examiners, should most carefully read Public Health Bulletin No. 90, that deals with the "mentality" of the arriving immigrant," by Dr. E. H. Mullan. The number of tests in memory, in reasoning, in learning applied to dazed arriving immigrants, besides the long list of arithmetical, geometrical, geographic and transitional tests to which these poor souls are submitted, would easily puzzle any of us, if taken unaware.¹

Number of Immigrants deported on medical certificates during fiscal year ending June 30, 1921.....	1175
Number of patients admitted to hospital during the year.....	151,723
Total treated.....	16,078
Pay patients treated during the year.....	15,415
Number of aliens certified for mental conditions during fiscal year ending June 30, 1921 (Insanity, feeble-mindedness, epilepsy, idiocy, etc.).....	206
Number of Immigrants certified for (1921).....	324

Immigrants and Venereal Diseases.

Among the wild accusations, the assertion has been made "that syphilis is being imported into this country by the immigration from Europe," and that the fact is "proven by the percentage of the aliens in our insane asylums."

Is that the truth? I venture it say no.

The assertion is exactly the reverse of direct evidence, as syphilis, like tuberculosis and alcoholism, rather than being "imported" into this country by the European immigrant, are acquired by them after landing in our civilized (read syphilized) cities, and from here "eported" to their native towns. Analyzed on scientific principles and subjected to the test of direct experience, the statement of the restrictions appears to be without any foundation.

Everybody knows that venereal diseases are admittedly and almost exclusively urban diseases, the product of luxury and excess, such as you find in the "atmosphere of license" in which the social evil thrives in large cities. Of the European immigrants that come here full 75 per cent derive their origin in rural districts. They come from the sunny hills and valleys of Italy, Greece and the Balkan States where they live, in scattered settlements, a pure, primitive life and where luetic diseases are practically non-existent. Their freedom from syphilis is not only a matter of common experience, supported by the greatest medical authorities, but is strikingly evinced by the sturdy and vigorous physique of these

(¹) It is refreshing to see a professor of psychology courageous enough to go on record as doubting the complete reliability of the so-called "intelligence tests," which in some quarters, especially during the war, were exalted so far beyond their possible value. But it is not so very surprising after all to any one who has seen these tests in their proper perspective.

It has, however, a truly sweeping arraignment of them that Dr. Elinor McC. Gamble of Wellesley College made before the Boston branch of the American Association of University Women in Radcliffe College, when she said it had been found that 80 per cent of the girls who receive a mark above the average in such tests at Wellesley fall below the average in the "intelligence tests" receive marks above the average on the mid-year grade. Perhaps it is a more sweeping arraignment than the professor realized, for it practically amounts to a statement confessing their entire unreliability and uselessness.

peoples, whose valor and endurance, just as it has recently astonished the world during their struggle in the great war, is to us almost daily a cause of marvel and admiration when we see here representatives of those races digging our subways and building our railroads.

There is absolute incompatibility between perfect health and syphilis, and this consideration alone should be sufficient to make one exclude "a priori" lues in the arriving immigrants. But there is a better test to apply. Syphilis and gonorrhea are pre-eminently if not exclusively, the most potent cause of sterility in men and women the civilized world over. The virus of syphilis so undermines the system both of parent and offspring, that the germ of life either rots and decays in its budding or is forever blighted in its further growth.

The immigrants from southern Europe are obviously and conspicuously the most prolific element in our population compared with the native stock. Nay, the very increasing population of this country is almost wholly due to the high nativity of the immigrants (see last Census).

And what does this mean? It means, that lack of a strong progeny and a high birth-rate stands potential energy and vigorous health of both parents: health first of the organ of generation to which the function of the reproduction of the species is entrusted, and secondly, of the general system of the individual, which in the last analysis means a rich, unsullied blood, endowed with power and that dynamic force that Bergson has justly called "elan creatif." Conversely, back of sterility stands exhaustion, hypothyroidism and a tainted devitalized plasma. This taint of morbidity may be remote or recent, local or systemic, but it always incapacitates the individual for conception and procreation.

For it is well to note here in passing, that one half of the so much deplored decline in the birth rate of this nation's stock in this country is not selective or desired, but is due to the absolute incapacity present in one or both parents for successful procreation, through some acquired or inherited disability as explained above.

Fertility and syphilis, therefore, are a contradiction in terms. If the European immigrants are universally credited with the former, necessarily they cannot be accused of the latter.

Official Inspection.

There has always been more or less speculation as to what results could be obtained by subjecting each alien to a rigid physical examination, to be performed divested of his or her clothing. During the fiscal year 1915, on account of reduced immigration, it was found possible to undertake an intensive examination, at varying intervals, of an entire shipload of immigrant, who were examined in private rooms, divested of clothing, the examination being on a parity with that required incident to examination for life insurance. Of 11,794 persons thus examined, the percentage of "dangerous contagious diseases" detected was practically the same as the percentage detected by the routine examination of a corresponding group.

It is noteworthy, however, that only 37 cases of these diseases were discovered in all of the 11,794 persons examined. This is specially to be noted, for the reason that there have been many self-constituted critics who have asserted that if an intensive examination of arriving aliens were carried out there

would be detected a very large number of cases of venereal disease. In the month of July, 1921, 11,000 immigrants were given intensive examination at Ellis Island, performed with removal of clothing, and of all this number only 43 were found to be afflicted with venereal diseases. It is the policy of the Public Health Service to carry out as intensive examination of arriving aliens as the facilities that are provided may permit, but it should be clearly evident from a study of the above figures and the methods employed during past years in the medical examinations of immigrants that the procedure as carried out is reasonably satisfactory for the purpose for which it is employed.

True, there is a good deal of luetic infection among the foreign element in our congested cities, but when we consider that the rate of male over female among them is about 3 to 1 and seventy percent. are between the ages of twenty and forty-five, we should not be surprised to find among foreigners at least the same amount of infection we find in the male population of the same native age group in every city. The greater prevalence of venereal diseases among immigrants who have been long residents of the United States is, however, only apparent. Studied as it is from the usual hospitals' and dispensaries' records, it is obviously one-sided, as the applicants for treatment to such free clinics usually belong to the poor or working-class of which the immigrants constitute the largest proportion in our cities.

It is evident, therefore, that such records can afford no scientific basis from which to draw comparative statistical deductions either for the whole population or for any selected group. In fact, while the aliens make such a "terrible" showing on the official books the well-to-do natives are treated by private physicians or resort to quacks, and thus escape detection and enumeration.

Likewise, one could dismiss as having no scientific basis the assertion that, because "the standard of cleanliness among immigrants of the present day is low" they must be subject to syphilis. Lues is not a filth-disease as some believe. It may be called a filthy disease and so it is, but the specific germ of the disease has the same relations to filth as might have the stars.

Experience teaches us on the contrary, that in 75 cases out of 100, the pathogenic germ of lues—the pallidum spirochaetae as well as the too vivacious Neisser bacilli hide and thrive among those who live behind silk curtains in the best "maisons d'orees" of the town and they haunt more the much bathed and perfumed viveur, than the uncouth peasant.

Native Declining Birth Rate Made Up By Immigrants.

Each successive census has shown a marked increase of nearly 16,000,000 lives over 1900, or 21 per cent. Such data as we have for births and deaths indicate a similar situation. Our birth rate is probably about 25 per 1,000, and the death rate for the entire country not far from 15 per 1,000.

The marked increase in our total population is in large measure the result of two factors, 1, immigration and 2, a high rate of increase in the foreign born rather than in our native stock. This is shown by the constantly decreasing proportion which the native whites of native parentage form of the total white population. In 1870, for example, this group formed 67.8 per cent. of the total white population in the United States, while in 1910 it had decreased to 60.5 per cent. The proportion of the foreign stock correspondingly increased during these 40

years. These figures are accentuated if we turn to certain areas of the country. Thus, in the New England States the proportion of the native white stock decreased from 52.3 per cent. of the total white population in 1890 to 40.3 per cent. in 1910. In the Middle Atlantic States the native white stock decreased from 51.8 in 1890 to 44.8 in 1910. In these important areas the native stock is playing an even smaller part in the composition of the total population. In fact, a very definite tendency toward depopulation has already fastened itself upon a large part of the native stock of the country.

Prof. Willcox in a recent paper has shown that this proportion has decreased about 50 per cent. in the course of the last hundred years. The rate of decline in the recent decades has been so rapid that Willcox suggests amusingly that if it were continued over a period of a century and a half, which is a comparatively short time in the life of a nation, there would be no children at all at the end of that time.

In Massachusetts, for example, where the best American data on birth rates are available, we find, first, that there has been a continuous decrease in the birth rate during the last 40 years, and, second, that this decrease has been most marked in the native stock. In 1910 the native stock had a birth rate of 14.9 per thousand; the foreign-born birth rate was 49.1 per thousand. In the same year the native death rate was 16. per thousand, while the foreign death rate was only 15.4. There was thus an excess of deaths over births corresponding to a net annual loss of a little more than one-tenth of 1 per cent. in the native stock, while there was an annual increase of 3.4 per cent. among the foreign-born population.

The reduction of the birth rate has affected mostly those who are both economically and socially best fitted to bear and to raise a family to maturity. Children nowadays seem to be an expensive luxury that only the poor can afford. The main cause of the falling birth rate, however, is the decline in the fertility of the married due to contamination of the strains through venereal diseases rather than to voluntary restriction.

This cause operates also in reducing the birth-rate in the descendants of the immigrants themselves in the United States. We note that the almost prodigious fecundity of the immigrant women (and it makes very little difference whether they be Irish, Italian, Jew or Slav), gradually but steadily declines from the first to the second and third generation, until it reaches sometimes in the fourth, sometimes in the fifth strain, the condition of sterility or quasi (one child sterility) encountered in the native stock.

Such sterility is nothing else but the result of syphilization and contamination of the racial strain, and an expression of the inexorable laws of natural selection and evolution, by which the decayed and unfit is discarded to make room for ever new forms of beauty and perfection. "Mother nature is kind and tender and she gets rid of the unfit as a form of social pity and mercy."

In the third generation the crucial test seems to occur among the foreign born. Those who survive beyond the third generation have a good chance to live and prosper in America.

It is equally wrong to infer from the percentage of the insane aliens in our institutions the prevalence of lues among them. While syphilis is often the cause of insanity, alcoholism is by far the most potent aetiological factor. Southern or Eastern European immigrants, as a rule, are free from the plague of alcoholism, at least when they came hither, and if there are many alcoholic insane aliens in the asylums of our country, they will be found to belong to the North, not to the South or East

Europe. Dr. Wood Hutchinson has well said: "Some of the worst and most obvious 'human misfits' are surely to be found in families where husbands or wives or both are victims of extreme alcoholism and the effects alcohol has on the descendants of those who indulge in it is the most patent cause of degeneracy of the race."

The few instances of true syphilitic psychosis among Italians in this country, will be seen to be among those who have long resided in the United States and acquired their infection right here.

Mental Diseases.

It is a misconception to believe that a more rigid application of the intelligence tests upon arriving immigrants—were such tests truly as valuable as claimed—would be capable to prevent the entrance of potential insanity of the aliens into this country. This theory presupposes the notion, which is not supported either by experience or statistics, that the less educated a man is the more liable he is to become insane. A study made by Mr. Horatio M. Pollock, statistician of the New York State Hospital Commission, of the intellectual and the temperamental make-up of those admitted for the first time to the state hospitals for the insane in New York in 1920 revealed that 61 per cent. were temperamentally normal and 88 per cent. intellectually normal.

Mr. Pollock states: "Mental disease may occur in a person of almost any type of intellectual or temperamental make-up. This fact was clearly demonstrated during the World War. Men of strong intellect and exceptional poise, who had withstood the strain of warfare for several months, at last succumbed when exhausted by intense physical exertion and continuous emotional stress."

A study of social facts relative to patients with mental disease, issued last year in pamphlet form by the National Committee for Mental Hygiene, shows that of the cases studied, 71.8 per cent. were from an urban environment and 28.2 per cent. from a rural. "These data," says Edith M. Furbish, the statistician of the committee, "would not support the theory frequently advanced that insanity is more prevalent in rural communities among farmers than in cities." On the other hand, the crowding of the population into cities, the increasing economic stress, and the reduction of the birth rate among the more stable elements of the population are conditions unfavorable to mental health. Likewise there is, unfortunately, very little influence of literacy and education generally upon the reduction of crime.

Dr. Frank L. Christian, superintendent of our state reformatories has said recently, that of 22,000 criminals whom he examined but 4 per cent. were illiterate, in a group of 1,000 prisoners, 64 per cent. had attended primary grades, 25 per cent. had finished the grammar school, 7 per cent. had high school education, and four were college graduates. We must face facts as they are, not as we wish them to be.

The following figures are very impressive. They are found on page 31 of the volume, "Insane and Feeble-Minded in Institutions" prepared by the Census Bureau of 1910. We are not getting mental degenerates from Italy, but sound brains and well-developed muscles. The truth is that Italians in many instances degenerate in America, due to heartless exploitations by employers, high rents, crowded street life, and the generally demoralizing environment in which our neglect forces them to live.

On examination, the table shows that Italians have the lowest per cent. of insanity of any race admitted to the country.

The ratios are conspicuously high for persons born in Ireland. Of the natives of that country 974.3 per 100,000 were enumerated in insane asylums, on January 1st, 1910, a proportion of almost one per cent. At the other extreme are the natives of Italy, with a ratio of 136.2 per 100,000 enumerated.

FOREIGN-BORN WHITE.

Country of Birth	In Total Population, 1910	In Hospitals for the Insane, 1910			
		Enumerated on January 1		Admitted During the Year	
		Number	Per 100,000	Number	Per 100,000
Total	13,245,545	54,096	405.3	15,523	116.3
Austria-Hungary*	13,345,545	54,096	405.3	15,523	116.3
Canada, English	810,987	2,777	342.3	1,039	127.0
Canada, French	385,083	972	352.4	266	69.1
France	117,236	614	523.7	146	124.5
Germany	2,501,181	13,787	551.2	3,193	127.7
Great Britain	1,219,968	4,555	373.4	1,445	118.4
England and Wales	958,934	3,706	386.5	1,148	119.7
Scotland	261,034	849	325.2	297	113.8
Ireland	1,352,155	13,174	974.3	2,833	209.5
Italy	1,343,070	1,829	136.2	863	64.3
Russia	1,602,752	3,705	231.2	1,709	106.6
Scandinavian countries	1,250,662	6,442	515.1	1,587	126.9
Norway	403,858	2,062	510.6	337	133.0
Sweden	665,183	3,677	552.8	874	131.5
Denmark	181,621	703	387.1	176	96.9
Switzerland	124,834	725	602.4	196	157.0
Other countries	967,093	1,554	160.7	702	72.7

* Includes Polish people who belong to Austria-Hungary, Germany, or Russia, and hence have no separate enumeration.

The study on the Mortality of Race Stocks in Pennsylvania and New York 1910, by Dr. Louis I. Dublin, showed very clearly that the foreign stock suffered appreciably higher death rates than the native stock, and always higher rates than those obtained in their native country. If we take the case of the Irish, when we compare the rates for the important causes of death after 25, we find that almost without exception the Irish at home enjoy marked advantages. For example, Irish males at home aged 45-64 had, in 1911, a pneumonia rate of 163.2 per 100,000 which is in very marked contrast to the rates of 620.5 for Irish born males in Pennsylvania and in New York.

With regard to pulmonary tuberculosis, the Irish born are under a great handicap. At the ages 25-44 for example, the rate for this cause among Irish males is, in New York and Pennsylvania, twice as large as for natives; thus, in Pennsylvania, the rate for Irish males is 375.8 per 100,000 compared with 185.2 for native born males, and in New York the corresponding figures are 662.9 and 352.0 respectively. At the ages 45-64, the Irish disadvantage is even greater. Among females at the same ages, the disparity is somewhat less marked, although it is still present.

Among Italian women in New York State, at the ages 15-19 and 20-24 the death rates from pulmonary tuberculosis are 220.6 and 247.7, as contrasted to 111.5 and 186.3 respectively, among native American women.

The much more favorable economic conditions under which they live in the United States than in their own country, should result in lower death rates. But in several instances, we found that this does not prevail; the facts indicate, on the whole, deterioration rather than improvement.

The occupation diseases investigation of the U. S. Bureau of Labor Statistics and of U. S. Bureau of Mines, and Mr. Frederick Hoffman's study of mortality from respiratory diseases in "Dusty Trades" (1919), show the excessive death-rates of foreign-born employed in these occupations.

"On the basis of a conservative estimate, it appears"—

says Hoffmann—"that of the 44,130,000 wage earners of both sexes, approximately 4,000,000 work under conditions more or less detrimental to health and life on account of the relatively excessive presence of atmospheric impurities predisposing to, or accelerating the relative frequency of tuberculous and non-tuberculous respiratory diseases."

The average mortality of pulmonary tuberculosis in 1913 in the registration area of the United States at the ages of 25 to 34, was 30.5 out of every 100 deaths from all causes. The corresponding proportion of deaths in the industrial insurance mortality experience of the Prudential Insurance Company was "67.9 per cent. for printers and compositors, 53 per cent. for upholsterers and 45.3 per cent. for potters." Of these fully two-thirds were foreign born.

The Prevalence of Tuberculosis Among Italians.

Exporting Tuberculosis to Italy.

Of the total Italian population in the United States, three-fourths (79 per cent.) are settled in cities having a population of more than 50,000, the North Atlantic regions absorbing the greatest proportions 72 per cent.).

Taking into consideration the fact that nine-tenths of these immigrants are of the peasant class, or laborers from rural districts in Italy, who in this country take up the most injurious occupations instead of the wonted agriculture, and that the vast majority among them (80 per cent.) are between fifteen and forty-five years—the age in which tuberculosis is most prevalent—the result is very easily foreseen.

While we all agree that urban life lowers the physical standard of the people and is detrimental to the national physique, few of us are aware that this injury is more profoundly and more extensively felt by the robust peasants than by the thin and pale city dwellers. Whether it is that the abrupt transition from rural to city life does not give the nomad people, so to speak, accustomed to an outdoor existence, time to prepare and elaborate sufficient means of protection against or adjustment to the new environment, or we do not know what, that all animals and even plants develop when transferred to new surroundings; or whether it is that the very high tension to which the nervous system is subjected by city life, often accused as a factor of disease, is in reality the main spring of that hyper-acuteness and over-activity of all our functions which braces the system constantly to a higher degree of vigor and vitality—it is certain that death and disease are more prevalent among the rural people settled in cities than among the city people themselves, in spite of the more robust appearance of the former. The example of the Indians, of the Negroes, of savage people, and presently of the Italians in America, furnishes an irrefutable proof of this fact. Tuberculosis is very prevalent among Italians, Greek and Eastern Europeans as the result of the intensified struggle for existence, under the onslaught of certain economic factors which assail and crush the laborer from every side.

Dr. Dublin's figures would naturally lead to the conclusion that mortality from tuberculosis among Italians is comparatively low, but any medical man who has been brought into close contact with the Italian poor of the large cities will bear witness to the fact that only a certain portion of the Italian tuberculosis population die in the district in which they have contracted the disease. "Their fear of consumption is much greater than among any other

nationality, and the belief in climate as the only cure for pulmonary disease is so firmly rooted that the first suggestion of anything abnormal with the lungs leads them to immediate preparation for a change to better climatic conditions." Men and women in very destitute circumstances will sell all their belongings, and without a second thought start back to their native towns. If for some reasons they fail to secure the free transportation tickets which the Italian Government places at the disposal of Italian Consuls in America, to meet just such contingencies, their relatives and friends come to their rescue. The faith in the home climate as the only cure for any chronic cough is so widespread that plans for change of residence are frequently made without consulting a physician, and at times against his advice. Thus the mortality quotient of their birthplace is increased, whereas the statistics of the center in which tuberculosis was contracted and developed do not reveal the existing conditions. Information to this effect may be gathered from the reports of the medical department of the Italian Commissariato d'Emigrazione, since they began to keep an account of the returning Italian sick. From such reports we gather that the proportion of Italian tuberculosis emigrants returning to Italy from North America has been increasing steadily every year. This constant return of Italian consumptives to their native land results in the erroneous impression that the mortality among Italians is very low, and shows that conclusions as to the prevalence of tuberculosis among Italians, based only on the rate of mortality, are necessarily misleading to a very large extent.

The proportion of Italian consumptives returning to Italy in 1903 was 2.92 per thousand, in 1904, 2.75; in 1905, 5.66; and in 1906, 5.61 per thousand. But this average is very much below the real condition because it only takes account of the very advanced, bed-ridden cases among steerage passengers, isolated in the ship hospital, who constitute a small fraction indeed, as compared to the large army of those in the incident or moderately advanced stages, and those traveling second or first cabin. The walking tuberculous steerage passengers escape detection, there being no special law compelling systematic examination of suspected cases: the cabin passengers escape medical supervision altogether, because they do not fall under the provision of the present law. However, it is a well known fact to the writer of this paper, to ship surgeons and to all those conversant with the situation, that an exceedingly high number of consumptives (the percentage being unobtainable for the reason stated above) travel second class, sometimes first class.

To see at a glance or prove that tuberculosis instead of being imported into the United States by Italians, is contracted by them in this country or from here carried back to Italy, it is instructive to read the figures of the official report, giving the proportion of cases of tuberculosis found among those west-bound and those east-bound. Among 309,503 Italian immigrants who left Italy for the United States in 1903-04, there were only two cases of tuberculosis treated in the ship's hospital, a rate of 0.006 per cent. (due to the strict vigilance of the United States Government at the ports of embarkation and debarkation). Among 169,229 homeward bound from the United States to Italy during the same two years, there was 457 in the ship's hospital, besides 17 who died at sea.

From this discrepancy between official statistics and enlisting facts it naturally follows that the determination of the frequency of tuberculosis among the Italians in North America is rendered impossible upon the basis of the official mortality records. Attention must be given instead to the tuberculosis morbidity, and the number of cases of daily infection, including both the pulmonary type and various surgical manifestations, in order to attain a relatively approximate insight into the condition as it exists.

In regard to certain regional elements, we find a very high percentage of tuberculosis among Sicilians, and those from the southern part of Italy in general, as compared with immigrants from central and northern Italy. This must be interpreted simply as a parallel to the larger quota of immigration from the south of Italy in the last ten years, rather than as an indication of special susceptibility to tuberculosis in these provinces.

However, the fact remains undisputed, nay, confirmed, by daily observations that the peasant women from Calabria and Basilicata, together with those strictly primitive one from the provinces of Girgenti and Caltanissetta, give in New York a very high percentage of tuberculous disease compared with any other regions of Italy, while the geographical distribution of tuberculosis in Italy shows, on the contrary, the very opposite condition. In fact, the death-rate from this disease is lowest in Sicily and the southern provinces in general especially along the eastern coast (14 to 16 per 100,000 in the province of Messina), and highest in the northern part, as in Leghorn, Milan, Genoa and Venice (30 to 32 per 100,000) (Prof. G. Sormani). So great has become in Italy the danger of infection from the scourge of tuberculosis through the reflowing immigrant current, and in an investigation ordered by the Italian Government was shown that tuberculosis with syphilis and alcoholism were the three main scourges that nullified whatever other economic advantage might accrue from immigration.

Transition from Agriculture to Industry and Urbanization the Main Cause of the Physical Deterioration of Immigrants.

"Within a few weeks the immigrant workman may pass from a quiet agricultural community to the roar and motion of a steel mill or stock-yard. It has been more than once pointed out that an economic loss is involved when a worker who is skilled in an intensive, though in some respects primitive, agriculture, goes into factory, mill or mine, where he must begin as an unskilled laborer." (M. Davis, Immigration, Health & the Community.)

From the health's standpoint this transition involves certain hazards, both of accident and of illness. The average peasant has been accustomed to slow motions. He has dealt with materials and processes which involved little risk of accident or disease. He has not been used to machinery. His new job may necessitate quick motions, there may be poison in the material to be handled, danger in the processes to be performed. Recent writers on industrial medicine have dwelt upon these contrasts. Let us appreciate the suddenness of the transition, the lack of preparation for it on the part of the immigrant, and the risks to health which are therefore involved.

The dominance of machinery today makes the mass of men mere attributes of the machine. Instead of making it an aid to a more liberal life, the worker becomes a

mere adjunct to its production of cheap commodities, vastly in excess of our real needs. Monotonous work dulls the fine edge of sensibility and is the cause of many neuroses in the operators. The energies of the factory workers are drained to a degree inconceivable in other times. This great fact of accumulated fatigue is of paramount importance. No less important is the tedium and the irritation of much factory work. The endless repetition of superlatively small operations withers the instinct of the craftsman. The modern factory worker can never hope to find pleasure in his specialized task, because he can never experience that generous warmth of nascent self-expression, which only comes with creative work and which is the outstanding feature of all our inherited tendencies and instincts.

Neither higher profits nor higher wages is the direct object of human aspirations, and yet both should be indirect results. The real goal is a fuller life for the workers and a sounder community life; in other words, social progress. The study of the workers' emotional and intellectual life shows that their productive forces can be stimulated and their productive energies released only by the satisfaction of their creative impulse. A workman's whole-hearted co-operation cannot be bought with money.

More detrimental to health is the change from an outdoor to an indoor life. Important changes in the diet may also be caused by the migration. Altogether, the change in climate, in food and in time spent out of doors must frequently produce physiological stress upon the individual and consequent physical deterioration of the race.

A striking proof of this deterioration—which constitutes, in my opinion, the most potent pre-natal factor of infant mortality and morbidity—is the great prevalence of rickets among immigrant children in America.

The percentages of foreign-born children suffering from rickets is exceedingly high, in suite of the fact that the majority of them are breast-fed. Rachitis is not a mere deformity of bones, but is the expression of profound pathological changes occurring in practically all the tissues of the body.

Due allowance being made for the defective condition of the mother's milk, *the deprivation of sunlight and fresh air is the pre-eminent factor and the primary cause of the prevalence of rickets* among the children of the foreign-born living in the tenements of large cities, as well as of the negro population. The Italian children brought up in rural districts are as badly fed, if not worse, than the children of the city, yet there is an immense difference in their physique and rickets is very rare among them.²

Everyone is familiar with the unhygienic and overcrowded condition of dwellings of immigrants in the large cities of the United States. It is a well-known fact that they reside in the poorest quarters and in the slums, so-called, not because they like to be there, but because their work and their gregariousness compel them to live there. They have nothing, in fact, in common with the slum population proper, nor do they bring or contribute any of the degrading characteristics of the professional vagrant or tramp which we meet among the "people of the abys." They live there because many times also their work is there. So in New York we find them on the streets adjacent to the Bowery, Mulberry

Bend, the "Lung Block," old "Richmond Hill," here in "Little Italy," or way up in the Bronx.

In the ten typical Italian blocks that I investigated in 1908 with the assistance and co-operation of Dr. Guilfooy, we found most startling conditions. Four of the blocks were in Harlem.

- (A) East 112th St., East 113th St., First and Second Aves.
- (B) East 114th St., East 115th St., First and Second Aves.
- (C) East 108th St., East 109th St., First and Second Aves.
- (D) East 106th St., East 107th St., First and Second Aves.

Of the families examined, 18 per cent. occupied one room, and 34.4 per cent. only two rooms, showing that a condition much worse than the average on the East Side, where a family consists of seven persons living in three rooms, three members being at home, two at school, and two at work. In another block, less than three out of every hundred families had five rooms and yet, as if one and two rooms for a family were over-abundant, about one-third of the families had a lodger, 41 per cent. two lodgers, 16.5 per cent. three lodgers, and 3.1 per cent. four lodgers. Thus, counting two children under twelve as equivalent to one adult, one-sixth of the rooms in this block were found to be housing as many as four adults each.

In the same block the great majority of the families were then paying over 25 per cent. of their income in rent, and many over 50 per cent.; in most cases the number of cubic feet of air for the occupants of sleeping rooms was less than is provided in hospitals and prisons, and the mixing of sexes in sleeping rooms, though not common, was discovered in a number of cases.

Out of the 174 families investigated in scattered portions of Harlem, only seventy-one were not overcrowded. The rest had from two adults and one child per room up to five adults regularly occupying the rooms. Of this number, there were thirty-two one-room apartments, sixty two-room apartments, fifty-one three room, twenty-six four-room apartments, and five five-room apartments. One hundred and thirty-five had lodgers, some of them as many as five and six.³

Crime.

Lately, some have accused our foreign-born population of being responsible for America's excess of crime over that of various European countries. Mr. Raymond Fosdick, who has made a careful study of the subject, mentions the heterogeneity of our population as offering a baffling problem to the police, but makes no attempt to lay the onus on our preponderance in crime at the door of any racial group. In fact, after setting forth the statistics, he says on page 20 of his book "American Police System": "If the offenses of our foreign-born and colored races were stricken from the calculation, our crime record would still greatly exceed the record of western Europe."

(²) Housing conditions in this city are as bad today as they were a year ago, according to statistics compiled by the Board of Health. Late in 1920 the entire city was tabulated to show lack of houses and congestion in apartments. From time to time since then these figures have been checked up and revised. Revision, however, was found unnecessary, for the investigation showed, Commissioner Copeland declared, that there was no justification for the Real Estate Board's contention that the housing shortage was over.

Two blocks, one on the lower east side, the other in Harlem, were taken as indices. Although the last tabulation was made Dec. 30, 1921, it was explained there has been no change in the situation since then. The following table shows the conditions.

	Dec. 30, 1921	Sept. 9, 1921	Feb. 5, 1921
Number of houses	90	90	90
Number of families	1,500	1,503	1,494
Number of persons	7,057	7,224	7,168
Number of rooms	5,195	5,181	5,176
Average rooms per person.....	3.46	3.47	3.46
Average person per house.....	78.60	77.80	77.79
Average person per room.....	1.36	1.38	1.38
Average persons per family.....	4.70	4.80	4.79

(Continued on page 148)

(³) Since I published these conclusions in my investigation on the "Effects of Urban Congestion on Italian Women and Children" in 1908 (see Medical Record, May 9, 1908), I have been gratified to see my view confirmed by the recent studies by C. F. Powers and E. A. Park (See Journal A. M. A., January 21-22) on the etiology of rickets.

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An Arresting Diagnosis.

Sir Auckland Geddes, speaking recently at the University of California, asserted that "the vast majority of men in public life in mental capacity and knowledge are far behind the best minds and the best thought as represented by the highly specialized university professor. That knowledge which is power is not present in our Governments today."

Mr. Henry L. Mencken never tires of pointing out the literal imbecility of our public officials.

We think that these critics have placed their fingers upon a notable weakness of our governmental system—and what is true of us is true of Europe—although we do not share Sir Auckland's view of the university professors' unique fitness. There are others, for example in the medical profession and among the economists, who are equally worthy, if not more so. To express one lack of our public governmental officials, Mr. Frank Vanderlip has coined a very apt term: economic illiteracy—and yet these officials are charged by us with responsibility for concerns of vast economic importance, so important that the issues of war or peace frequently hang upon a nice understanding of them. Mere politicians are thus charged with the conduct of matters that call for the best economic minds.

Sir Auckland is himself a medical man who has been a university professor. He has carried his diagnostic abilities over into the domain of public life.

We do not seem to be awake to the dangers of reposing the difficult and dangerous tasks of public life, particularly in the domain of international relations, in the hands of ambitious fools. The penalties, in terms of blood and tears, poverty and disease, are too great.

Society at large ought to be grateful to Sir Auckland

for his diagnosis of the principal factor making for the world's present sickness. Shall we ever be rid of our atavistic publicists? What is the prognosis—continued incompetence, corruption, and wars, or the scientific methods that are commonplaces in so many other fields of human effort?

The High-brow Crank.

Take a "nut," educate him and confer much culture upon him, and you will have an individual admirably adapted to initiate uplift at every point. He will spend part of his time reforming the currency; another part of his time will be given to the formulation and passage of prohibitory laws; another part will have to do with health insurance; while yet another will be devoted to compelling everyone to have an annual mental examination. The last, by the way, is something that will inevitably be projected by one of these whirling dervishes upon a gasping world.

There never was a time when so many cranks of high degree careened about the country exuding schemes for the demoralization of the masses and disguised in the habiliments of democracy. As a matter of fact none of these distinguished reform-dripping cranks would be constitutionally capable of emitting a really democratic scheme. Nothing that they dope out would ever infringe the inalienable rights of certain groups; prohibition is perhaps the best example that could be cited of an arrangement that leaves the cellars of the very rich equipped for time and eternity with vintages acquired before the prohibitive statutes went into effect, while it leaves the common man the now familiar alternatives.

G. K. Chester has pointed out that the schemes of uplifters are always aimed at certain classes, and never at the entire social organism. This truth will be found elaborated in his book, "What's Wrong With the World."

After much more mischief shall have been inflicted by the uplifters society in self defense will discover ways whereby it shall be able to protect itself.

A first step will be the identification of incorrigible uplifters and their formal psychiatric classification as cranks and potential enemies of society.

We have to learn that there is no essential difference between the cranks of the lower social orders and the cranks of high degree—from the psychiatric standpoint. Education and wealth alter the fundamental equation only in that they lead to the selection of different methods for working mischief; more subtle tools are available in the case of the fortunately placed.

Let Us Reason Together.

We are increasingly afflicted by a group composed of gentry who either will not or cannot work; hence the crime wave. It is futile to blame police departments for fundamental social evils with the genesis of which they have actually nothing to do.

Those who will not work are subjects for psychiatric considerations; those who cannot work are the physically unfit. The reasons why such persons exist in large and ever increasing numbers are obvious enough to the student of our social pathology.

Under older and autocratic systems the same kind of people existed, but they were helots. We can no longer compel them to work, after the manner of the ancient Spartans. Modern states, as yet, have only the remedy of foreign war as "a swift remedy for internal unrest or failing patriotism."

Yet in the face of such facts we make confusion doubly worse by creating mighty phalanxes of sabotaging workers made sullen by the deliberate deprivation of the erstwhile national beverage. "No beer, no work" seemed only a facetious slogan when it was first coined, but it is in no spirit of levity now that we recall the words. The workers do not chant them now because of their sullenness.

Rational modification of the prohibition laws will do much to restore industrial normalcy. As a matter of fact we shall be driven to revision. It is not an academic subject at all, but an intensely practical one.

When the looms of toil are once again lubricated by beer they will spin merrily, operated by contented and not by sullen workers.

This desideratum can be accomplished by wise statesmanship without the restoration of the deceased-for-all-time saloon.

The Aftermath of War.

Army medical officers report to the War Department "the most clear-cut evidence of physical deterioration" due to the "strain incident to the prosecution of the World War." Especially noted is "the persistently large percentage of officers showing either excessively high or abnormally low blood pressure." It appears that "the blood pressure of those officers who served in the A. E. F. who were over 45 years of age was materially raised, and in a majority of cases abnormally so, and in the case of younger officers, 25 to 30 years of age, was in the same degree decreased." These men are restless and many of them show "an unnatural tendency to worry, fatigability, and lowered resistance to all infectious diseases." The diagnosis of psychasthenia is frequently made. There is "a decided tendency toward increased introspection and mental exaggeration of all forms of worry and mild physical ills." These conditions have resulted recently in an unusual number of hospital admissions for observation and treatment.

The practical deduction is that highly civilized modern men are not adapted to withstand the strains of warfare, particularly as warfare is nowadays carried on. It is not at all likely that the captains of Alaric manifested such signs as our A. E. F. men, after comparable service.

Under ordinary circumstances it appears to be a fact that such officers constitute preferred risks.

It is probable that more tobacco was used during the years of war strain than would have been used had the times been peaceful. This excess might have been a factor in disturbing unduly vasomotor tone, vascular integrity, and the higher nervous mechanisms.

The Sub-human Devotees of Cults.

The real reason for the hold that certain cults have upon their adherents is to be found in their subtle appeal to selfishness. Probably every physician has noted the peculiar selfishness of these devotees. Their curious attitude toward the sick, in the practical relations of life, is obviously accountable upon the grounds of personal selfishness, fortified by a so-called religious philosophy which plays up this very vice.

It is a waste of time to discuss these cults in the usual academic manner. The best and most practical way is by the acid test of human service. When one finds that the chief object in life of the rank and file constituting a cult is to dodge service, and to camouflage this determination under a cloud of philosophic Pollyannaisms, one does not have to delve into litera-

ture or fence with apologists. The evasion of human service settles the matter.

But what is the significance of such an attitude toward life? It is simply a manifestation of an inferiority complex; unable to meet the strains of normal living, because of mental or physical deficiencies, the victim takes refuge in a philosophy which denies the reality of disease. This not only exempts the devotee from the most ordinary service in behalf of the ill, but exempts his brother devotees from ordinary service in his behalf in case of sickness, barring, of course, the Pollyanna stuff.

The Hermiones who affect to believe that disease is error are never found aiding anybody with a typhoid diarrhea, or boosting anyone through the crisis of a pneumonia, for such things mean work and self sacrifice. What can "for whoso thinketh to save his life shall lose it; but whoso loseth his life for My sake, shall find it" mean to the adherents of these cults?

Normal living implies service, and this certain members of society are unable or unwilling to give. The difficulty in one case may be the effort syndrome, in another mean-spiritedness. In both cases self-justification may be sought through the medium of a so-called philosophy which makes a virtue of evasion. Membership in cults founded upon such doctrines is simply a confession of inferiority, as rational minds view the problem.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

The Pay Clinic.

Once upon a time there was a type of practitioner known as the dollar doctor. We thought that he had been gotten rid of until the advent of the pay clinic.

It has long been notorious that in spite of the fact that educational requirements have been so highly raised a much poorer student type has been training for medicine than ever before. It is the entrance of such men into the profession that has made it possible for the uplifters to found their precious pay clinics. That is the whole of the unpleasant truth in a nutshell.

It is logical, if disagreeable, that there should be a large-scale revival of the dollar doctor. Formerly he operated as an individual disgrace; now he has been institutionalized; but he is no more respectable than ever before.

The worst, presumably, is yet to come. It would be easy to prophesy, but we forbear; sufficient unto the day is the evil thereof.

The Alcohol Question.

We agree with the French Premier and other of our Gallic critics that wine and beer are better beverages than syrups, sodas and near-beer (*alias* far-away beer).

The restriction of stronger stuff to its proper medicinal employment would have been feasible if we had adopted a rational policy of regulation. The retention of beer could have been effected without perpetuating the saloon. As for French wines, it is platitudinous to point out what a part their importation might have played in the economic rehabilitation of our late Ally.

But all this is in the nature of a post mortem. We are confronted by a new condition. How shall it be dealt with?

We think that the overwhelming of an individual by the stuff that is now being sold and drunk ought to be

regarded as *prima facie* proof of mental deficiency. The fact of mental deficiency should then be established by appropriate tests, which have now been sufficiently developed and applied to render them of great practical utility in this as in many other connections. The mere labeling and publishing of these individuals to society would not accomplish much, however. We should have to go much further. What would be the next logical step?

Our own view is that the legal mechanism charged with jurisdiction in this matter should have the power to exempt individuals thus branded from the punitive operation of the Prohibition laws. It is only a minority, and a minority useless to the race, that is concerned. The elimination of this sub-standard group ought to be facilitated in some way, and at the moment we can think of no better or more humane public policy.

Correspondence

Intravenous Medication for Country Practitioners.

To the Editor of THE MEDICAL TIMES:

I believe that the following description of an inexpensive outfit for use by doctors in rural communities and small towns for intravenous medication may prove of interest. Of course, readers of this article will realize that I am not advocating crude methods of practicing medicine, but I do believe that the outfit described herein will help solve what is now a problem for many physicians. Of course, those practicing in the large cities with adequate facilities at their disposal will not be particularly interested, but so many doctors are practicing under difficulties that I hope this simple outfit will be found helpful.

Some time ago I was asked by the Executive Officer of the State Board of Health how many doctors in Mississippi were using intravenous medication in the treatment of syphilis. I was unable to say, but upon investigation I found that the percentage was very small. The reason given for not using neoarsphenamine was that it was too difficult to obtain freshly distilled, sterile water and that to maintain a place for the sterilization of syringes, etc., was too much trouble for the average practicing physician to which occasional patients with syphilis would come. It was plain that if the general practitioners were to be interested in giving intravenous medication that some simple method must be devised which could be adopted by them. Acting on this conclusion the following provisions were made:

The State Hygienic Laboratory was requested to put up sterile, distilled water in 15 c.c. sealed ampules. These were sent to any physicians, free of cost, upon request. A few of these ampules of distilled water, together with two luer syringes, one 10 c.c. and one 2 c.c. with needles, 20 x 3/4 and 20 x 1 1/4, a 4-ounce bottle of denatured alcohol, an ounce of cotton, the neoarsphenamine and the mercury in oil for hypodermic use together with a sterno heating unit can be carried in a physician's small satchel. With this equipment neoarsphenamine can be given a patient just as safely and scientifically as in a hospital.

The sterno heating stove is lighted and the syringes and needles put in to boil. After their sterilization is accomplished the 10 c.c. syringe and the 20 x 3/4 needle are washed out with sterile, distilled water from the first ampule, then the syringe is filled with sterile, distilled water from the second ampule. The end is pinched off the neoarsphenamine ampule and a solution is made in the ampule, which concentrated ampule solution is taken up in the 10 c.c. of sterile water in the syringe. The patient's vein is isolated by applying a tourniquet made from the inner tube of an automobile tire; the arm is cleaned with denatured alcohol; the needle is inserted into the vein; the plunger is drawn back on to see that blood enters the syringe and then the neoarsphenamine is slowly given.

Three precautions are necessary:

1. That the syringe be cooled.
2. That the needle is in the patient's vein.
3. That three minutes, at least, be required to give the dose.

When mercury is to be administered the 2 c.c. syringe with the 20 x 1 1/4 needle is used. The syringe should be hot enough to liquefy the oil. The upper, outer quadrant of the buttocks is cleansed with the alcohol and after the syringe has been loaded and air expelled the needle is inserted as far as the shank will allow it to go. The plunger is withdrawn slightly to see if any hemorrhage appears in the syringe which would indicate that the needle is in a vein. If no such hemorrhage exists, the dose

of medicine is slowly expelled; after which the site of the puncture is lightly massaged. If a vein has been entered, the needle is withdrawn and inserted into another place.

The outfit described is practical for giving neoarsphenamine. The whole apparatus, not including the medicine, should not cost over \$3.

HARDIE R. HAYES,

A. A. Surgeon, U. S. Public Health Service,
Director, Mississippi Bureau of Venereal Disease Control.

Etiology of Tonsils and Adenoids.

To the Editor of the MEDICAL TIMES:

The article in March number, by a doctor from Schenectady, N. Y., entitled "Diet as a Factor in the Etiology of Adenoids," brings me to make myself clear to your readers, on my belief regarding etiology of tonsils and adenoids.

Every child born since Adam and Eve began procreating, has been born with four tonsils, not taking into account anomalies; two faucial; "one lingual and "one pharyngeal"—or adenoid. The why, or for what purpose, I leave unanswered.

Some children, with much larger tonsils, than some others—and probably the father or mother, one or both, have been born with tonsils like unto the children. The tonsils—all four—are natural structures of the human body; and not new or old growths, as so frequently spoken of by doctors.

Now, if these premises are correct—and I would have histologists to correct me, if I am wrong—then much of our nomenclature is misleading. My way of thinking, convinces me that calling "adenoids"—"growths"—is wrong. I realize that many children have so small developed tonsils (all four in tonsillar ring) that on looking into such throats, one is justified in saying "no tonsils present," meaning visible tonsils, on examination. Further, the tonsils—all four—after complete removal, will never return; no more rational to speak of tonsils growing again, returning again, after clean removal; than to speak of any other natural part of the body, reproducing itself again, after removal by surgery.

I am fully aware that after an operation for removal of adenoids, or tonsils, and months have elapsed, sometimes one finds tonsils or adenoids as large as when the operation (previously done) was made. This has occurred after my operation; as well as after other surgeon's operations. The explanation is simple—only part of the diseased organ was removed, and the part left in situ continued to enlarge because of infection; until we find the adenoid or tonsil space well filled with the diseased structure very like the original part removed at operation.

The false theory that tonsils and adenoids, sometimes grow again after removal is cherished by some friends of mine, on which to hang the error of the surgeon, when the operated patient is returned, months later, with adenoids, or tonsils again giving trouble. I have been frankly saying to any patient, when this occurs, that it simply means that my operation was not complete, and by permission, I will operate again gratis.

That the diet has a marked influence on the growth of tonsils and adenoids: I am not disputing. However, it will be many years before the medical profession will, by dieting of people, arrest or prevent chronic tonsillitis, or acute attacks. When we doctors do not know the etiology, we so frequently lay the systemic blame to the stomach, or what we put into our stomachs or on the intestinal organ. We accuse the "fellow" who can not "talk back."

The article referred to, quotes many doctors' sayings; for whom I have great respect; but surgical and medical science is progressive, and would these same fellows write in 1922, as they did? Some of them would. I am not condemning the article in March number as a whole; some of which I am convinced is good logic.

That adenoids are detrimental only when obstructive to breathing is incorrect; just as faucial tonsils are not to be removed except they are so large as to obstruct breathing, is poor reasoning. My belief is that all perfectly healthy, and normal sized faucial tonsils should be left in situ, and patient told same; however, I am just as positive in my belief, that every chronically infected tonsil, without regard to size, should be peeled out of its bed, clean and all within its capsule removed; and the adenoids, just as cleanly—every particle of it—removed at same operation. When all crypts in the tonsils, and adenoids, have been removed, the patient is much benefitted; but when diseased tonsillar structures have all (except lingual) been removed at operation, the patient more permanently benefitted.

I am accustomed to advise every patient with chronic infected tonsils, that it is dangerous property to carry, and if I operate, I always remove the adenoids even if only a cushion of adenoid tissue is present. The operation for removal of both tonsils and adenoids is skillfully made within five minutes, from beginning of the operation.

I prefer local anesthesia by procain, in all patients whose confidence I can obtain, that I need not cause them pain; others, general anesthesia.

I have for years, lost all fear of hemorrhage following operation, though I hold patients in hospital for about six hours.

My method in operating for removal of tonsils and adenoids; is what I copied from studying Dr. Matthews' operations at Mayo Clinic, seven years ago. I have never seen a more simple, successful operation to remove tonsils, than Dr. Matthews made; and he would make the operation in four minutes, under local anesthesia. I had, before seeing the work at Mayo Clinic, been removing adenoids with Stubbs' Knife Curette; which, if properly used, does excellent, clean removal. However, I have changed to the La Force instrument for some years; because the latter makes just as clean removal of adenoids but can not cut so close, as to shave off all mucus membrane from adenoid attachment. Every adenoid-tonsil is attached by a pedicle, however short; and by movement of instrument slightly, both anterior and posterior, also from side to side, before cutting, the mass of lobulated tissue of the adenoids is fed into the fenestra of the instrument; after which if instrument is placed accurately, with some pressure against upper pharynx, the operation consists in pushing the sharp knife through adenoid pedicle.

My mistake, in tonsillar operations, was in fixing with a fixation forceps the tonsil while separating the tonsil from its bed between pillars, until watching Dr. Matthews, who explained why one should not use any instrumentation while separating tonsil except tongue depressor in one hand, and in the other hand only a separator; allowing the free rolling movement of tonsil while separating it from its bed, and separator would follow just outside of capsule. For seven years, I have never found his theory wrong. I use by preference a Carpenter separator with tonsil spoon at other end of handle.

For any one to outline a diet to prevent adenoids in children, would seem as philosophical as to outline a diet for pregnant mothers to prevent the growth of the appendix. That the hypertrophy of tonsillar tissue in children, can be much increased by certain foods rich in elements to stimulate mucus membrane activity, I am persuaded; but I am not ready to outline such a diet table, for want of knowledge of processes of digestion. I do not believe that the starving children in Russia are suffering with symptoms of enlarged tonsils; and very probably because of lack of foods; but foods will be taken when available; so long as children are children, and even later.

Professor Gradenigo, of Naples, in reference to etiology of hypertrophy of tonsils and adenoids, says he never saw a marked influence on the hypertrophy, caused by the diet.

I do not believe that more children suffer from tonsillar disease in this age, than in former periods, but we look more for their presence or absence now, than we did even twenty years ago; and surgeons, like other people, usually find what they are looking for, if it is there.

H. D. RINEHART, M.D.

PASADENA, Cal.

The Physician's Library

Doctors—Entre Nous.—By James Bayard Clark. 66 pages. New York: Medical Times Co., 1922.

In this little book are three stories. The striking feature of these stories is the combination of quiet whimsical humor and peculiar force. One is carried on a high tide of amusement to a sudden and surprising termination.

With a keen blade indeed the author pierces the shining armor of the profession and lays bare to all an easy view of some of its usually obscure faults and weaknesses.

This book should be read by every medical man where the English language is understood. We doubt if the medical profession would care to have it read too generally by the laity.

Such wit and vigor has never before been applied at once to the medical profession.

The publication has just made its appearance at the medical book depots and can be had from the publishers, THE MEDICAL TIMES, 93 Nassau Street, post paid on receipt of \$1.00.

"Ultra-Rapid" Treatment of Gonorrhea

Phélip declares that those who try the method he has been applying for a year will be amazed at the facility, the brilliant results and the certainty of this technic, judging from his experience in ten cases. It consists in the ionization of 10 c.c. of a 1 to 3 per cent. solution of a silver salt introduced into the previously cocaineized urethra. He never uses more than 30 volts, and does not give over three or four ionization sittings.—(*Lyon Médical*, August 10, 1921.)

(Continued from page 144)

Aside from Mr. Fosdick's testimony, however, there is considerable authoritative opinion to refute such implication against our foreign-born. According to the report of the United States Immigration Commission, such comparative statistics of crime and population as it has been possible to obtain, indicate "the immigrants are less prone to commit crime than are native Americans."

The United States census on prisoners and juvenile delinquents in institutions, says: "It is evident that the popular belief that the foreign-born are filling the prisons has little foundation in fact; it would seem, however, that they are slightly more prone, than the native whites, to commit minor offenses."

The 1915 report of the Chicago Council Committee on the Crime quotes figures to the effect that the foreign-born, who form 46.7 per cent. of Chicago's population, furnish only 35.3 per cent. of the city's arrests and 33.4 per cent. of the convictions.

Disproportionately, perhaps, yet surely, some part of the American attitude toward the Italians, has been determined by their record in crime. If this history had in it less that is characteristic it might indeed count for less. For it is not so much the number of offences that has fashioned public opinion as the evidence they appear to give of a violent and fearsome disposition. That the victims are themselves Italians, and that the roots of the dispute often lie in the past or in a misadventure of love or jealousy is insufficiently realized.

Other sorts of crimes or misdemeanor need but brief mention. Of *drunkenness* there is among Italians less than among some nationalities in the country. Their sobriety is proverbial as much as their frugality? No one has ever seen a drunken Italian woman. The Italian child easily escaping from parental checks, often runs a career of idleness and crime which pains the heart of his more restrained, if less assimilated, parents, and may lead them to regret the day of their coming. (Robert F. Foerster, *The Italian Immigration of Our Times*.)

In the matter of *dependency*, the burden, thus far at least, has been less than low earnings and unemployment might lead one to expect. There is no statistical evidence to show that the Italians are an admitted social burdence of any consequence. Few are in almshouses, in the asylums for the insane and in homes for the incurables, compared to nationalities from the North of Europe (see subjoined table). It is when their families are with them in the United States that they appeal for aid; the exhausted or starved bodies, stricken with illness, need repair. The very frugal ways of the unmarried or those whose families are abroad enable them to tide over most personal difficulties out of savings and the help of relatives, but often, no doubt, the pinch is communicated to the dependents in Italy. There are indications that the repugnance to asking aid which exists among the newcomers, wears away somewhat with lapse of time, and it is quite possible that, like so many of their predecessors in immigration, will frequently fall a burden upon charitable institutions. If that should happen, the reason would lie, not in such trifleness as the Irish and some other groups manifested, but contrariwise (in addition to low wages) in that blind economy which often sacrifices physique and earning power (See sub-joined tables, also Immigration Commission).

In regard to immorality, it is remarkable to note the almost complete absence of Italian women among those arrested for soliciting on the street or found in houses of ill-repute (see subjoined tables).

The Italian tramp is non-existent and no Italian was ever counted in the bread line of any city.

In the case of the Italian immigrant his worst enemy has to admit that he is industrious, sober and trustworthy, and that he earns what he gets. The fact that he is charged with committing crimes of a violent character should not prejudice people against the entire Italian population. Most crimes are of a momentary passion and are usually due to jealousy, cards and women. But the charge is made once too often that Italy is dumping its criminals to these shores, is a malicious fabrication of the restrictionists.

In the first place, no Italian can secure from his government a passport if he is a fugitive from justice; and in the second place, Italy furnishes to every prospective emigrant a document, "*fedina penale*," which shows whether the holder has ever committed a crime or in any way has come under the condemnation of the law.

(The Emigration law of Italy was enacted in January, 1901, and was the first emigration law of Europe to undertake entire direction of an emigration movement, including supervision over transportation and extending protection to the Italian citizen abroad. The Italian law has since served as a foundation for the legislation of Hungary, the proposed law in Austria, and in all probability marks an era of emigration control which influences in time the course of every European Government.)

The causes of juvenile delinquency are many and not hard to find. For twenty years this nation has been debauching the youth of our land through a repetition of vice and crime exhibited in moving picture shows, in the burlesque, and in many cheap, unregulated and unsupervised forms of commercial recreation. The nation-wide wave of robberies and high crime is the fruit of such exhibitions. The failure to provide descent recreation, inspiring wholesome ideals, has weakened moral and physical resistance. The school, by developing a great machine which has neither sensed nor prepared its youth for the environment developed through city conditions, has divorced itself from life. It has turned hundreds of thousands of children into society as misfits. The results is restlessness, crime and failure to sense civic and social responsibility.

Apart from the lure and demoralizing effect of life on city streets, a potent reason of juvenile delinquency, is loss of parental control. The child speaks one language, the parent another.

This matter of language is a wide gulf between parents and children. It must be bridged not only by the parents learning English, but by the intelligent use of their mother tongue by the children.

Imagine the helplessness of a mother who knows no English and whose children feel that Italian is to be despised and cast aside. The children talk English in the home and even plan to disobey her before her eyes when she has no idea what they are saying.

Child Labor.

Child labor is one of the greatest handicaps to the progress of the immigrant in America. Few realize how widespread and injurious it is; little children of even four and five make artificial flowers or pick out the shelled nuts so attractively sold in glass jars. In the glass industry in Pennsylvania boys work at night, in the berry fields of New Jersey and New York, in the canning factories shelling peas or beans, in the cotton factories of the South tending spindles. All these children, robbed of education, of all chance for beautiful play, stunted by long hours of work which is not heavy, perhaps, but tedious and mind-deadening, in close rooms amid dust-laden air, wear out at an early age and become a problem to organized society. The immigrant sacrifices his children because he is in desperate need of the few pennies their efforts bring in.

Yet in spite of all evidence to the contrary, we hear a great deal about the lawlessness of the foreign born. It may surprise us to learn, that in the report of the Provost Marshall General, referring to the war, it is stated that of the foreign born who registered for the draft, a percentage of 1 4/5 was reported for desertion.

The percentage among the native born for desertion was 3 1/5. Yet we hear it said many times that the foreign born are a lawless and disloyal element. Evidence of loyalty was given in a striking manner during the recent war by the whole-hearted service of our foreign born, who poured out their life blood on the battlefields. From a population only 1/5 of the native born, the foreign born gave 1/3 of the overseas fighting men. They over-subscribed their loan quota every time and they supplied 1/2 of the workers in war industries. And let us not forget that fully 1/3 of our brave boys that went overseas and made their supreme sacrifice for this country, were foreign-born or the children of foreign parentage. Many of them were illiterate, but their illiteracy did not prevent them to do their duty for the country of their adoption. The immigrant can be maimed and killed—and they are—without a cry and without indemnity. They may die from the "bends" working in the caissons under the river, without protest; they can be slowly asphyxiated in crowded tenements, smothered in dangerous trades and occupations (which only the ignorant immigrant pursues, not the native American) they can contract tuberculosis in unsanitary factories and sweatshops, without a murmur, and then to do this country an additional favor, when they are so disabled and sick, they go back to their mother country to die, thus giving the American cities the credit of a low death-rate.

The Italians, even of the working class, possess an almost inborn aesthetic sense, and an intellectual idealism, a spirituality of mind, as Prof. Geddings calls it, which consists of a certain sensitiveness to the finer values of life and appreciation of all things intellectual, beautiful.

This sensitiveness is the product of the intellectual life of the country, and the heritage of its past glorious history.

It presupposes in the people an admiration for intellect, respect for it and deference to it. When Carducci, the great national poet died, all banks and stores in Italy closed for two days, the whole nation being in mourning. Is there any other country in the world where such a manifestation could be possible.

It is the people who gave this intellectual idealism, that can attain true distinction as creators of civilization.

That is why the Italian strain has historically outstripped all others by being thrice—once politically, once religiously, once intellectually—the dominating power of the world.

It would be surprising indeed if the nation that thus deeply influenced every phase of human thinking, and intellectual development, should fail in its contribution to America through its offspring here.

It is certain that the enrichment of the art spirit and the art production in our democracy will prove to be the distinctive contribution (certain not the only one) of the Italian-American. Prof. C. H. Cosley, of the University of Michigan.

The big industrial contribution of our modern Italian is labor, justly remarks John H. Mariano in his book "*Italian Contribution to American Democracy*." It is a humble contribution but no other contribution is more fundamental or important.

What have the fifteen per cent. who have gone

into agriculture done? At one time we heard a great deal about the abandoned farms of New England. There are no such things now. The Italian has entered these rocky places and made the hills "bloom as the rose." Connecticut, New Hampshire, Massachusetts, Vermont and other states show where Italians have taken hold and made great names for themselves. They have purchased little plots of ground and worked intensively over them so that today in the East they own a large part of the truck farming and vegetable raising industry here.

But they don't stop in New England. In New Jersey they have important settlements in Vineland and in Hammondsburg. Bryan in Texas is their most important colony in the South. Dahne and Lambert were settled by Italians in Alabama; Valdesi and St. Elena in North Carolina, Sunnyside in Arkansas; Genoa in Wisconsin, Asti, Santa Barbara, San José in California are some examples of their Pacific Coast initiative.

The influence of our Italian population in these and many other activities in our national life is undoubtedly very great. The innate prestige that attaches itself to Italy and to Rome is perpetual and enduring. Are not these Italians of our day the new type of the old Romans whose civilization in many ways has never been surpassed and whose aims, ideals and results offer an example for every other race to follow?

The Literacy Test.

The literacy test is obstructive not selective. It does not exclude the undesirable and keeps away from the country just the kind of labor of which the country is very much in need. If coarse labor is not allowed to come in, either such work must go undone or it must be done by a class of labor which despises both that kind of work and the pay which goes with it. It has been claimed that immigration increases unemployment. As a matter of fact, immigration does not overstock the labor market but it varies inversely with the unemployment because the business expansion which calls in the immigrant reduces unemployment and vice versa.

The educational test not only is not a test of an immigrant's education or intelligence, but it is admittedly no guarantee of fitness in a newcomer. It does not afford a proof either of a man's moral character, honesty or intelligence, and all will agree that a man may be highly intelligent and unable to read and write. It simply shows that the man lacked opportunity to go to school. On the other hand, some are not actually illiterate, but greatly ignorant.

What we want in an immigrant is health and vigor, energy, honesty and willingness to work. As has been remarked an illiterate immigrant shows that he must have virtuous instinct by the very fact that he comes here crossing the ocean at a great risk, for he can have no other purpose than to support life by his toil.

But higher educational and moral requirements should be demanded in an immigrant at the time of his naturalization, not on his admission to land. Make admission to suffrage more difficult and less mechanical, so that we don't illude ourselves that we are "assimilating" immigrants by the simple fact that we turn them into American citizens every

three or five years, whether they understand the responsibility of the act or not. Admission to suffrage ought to be made a cause of high honor and pride for every foreigner coming to these shores, a prize to be devoutly coveted, the highest premium this republic can offer, instead of some kind of permit to work, as it is now.

It has been claimed that immigration increases unemployment. As a matter of fact, immigration does not overstock the labor market, but it varies inversely with unemployment because the business expansion, which calls in the immigrant, reduces unemployment and vice versa. There are always many people unemployed, especially in the slums of large cities but these are the people who are either crippled or disabled, or unwilling to work. Those are the unemployable.

Some have said that immigration lowers wages and the general standard of living. As statistical analysis will show, wages were higher (even before the war) than thirty or fifty years ago, and skilled labor has never been at any time or in any place above the present standard. In the period of the older immigration wages of unskilled labor, and even of some of the skilled mechanics, did not fully provide for the family support. The shortage had to be made up by the labor of the wife and children and even on our American farms, in the earlier periods, women and children were worked and overworked to bring the family out even at the end of the year.

On the other hand, actual advance in wages in many industries, reduction of hours of labor, increase in union membership and strength have gone on with increase of immigration. The new arrivals, instead of displacing skilled labor and pushing aside the American working man and the older immigrants, as charged, have in reality been pushing them up, and maintaining them on the higher economic levels.

Americanization Fallacies.

We hear a great deal about Americanization and compulsory citizenship, as the panacea of the immigrant's evils. But have we regarded the immigrant as a civic factor of any importance? We cannot treat the foreigner as if he were something to be absorbed automatically, by inevitable chemical reaction in the course of time. Americanization should not imply repudiation of Europe. We dare not lose sight of the reverence we owe to the civilizations which lie back of many of the immigrants who come to this land. Strange and uncouth they may seem to us, but among them are the children of great and abiding civilizations, and let no man be disesteemed merely because he looks unlike ourselves. Our difficulty in understanding him is chiefly due to our failure to respect the essential humanity of the immigrants and our disregard of their finer nature.

Frank V. Thompson, Superintendent of Schools in Boston, in his book "The Schooling of the Immigrant of the Carnegie Foundation," says: "The native born (Americans) must rid themselves of two kinds of obsession before they will be spiritually fit to undertake the task of securing the whole-souled loyalty and co-operation of the foreign-born. These delusions are, first, that native Americans constitute a superior race, when compared with the foreign-born,

Note—Illiteracy in the first generation of immigrants however, is remedied in the second generation, and as the Census figures show, there is today greater illiteracy among native parents than among native whites of foreign parentage. The average illiteracy of the former is 5.7 per cent and of the latter 1.6 per cent.

Note—It may be well also to remember that there was a time in history when the ability to read and write, rather than being the privilege and mark of intelligence of high social standing was considered the attribute of the clerical class, scribes and amanuenses. The nobly born, the grand chevalier and statesmen considered it below their dignity to read and write.

and second, that our institutions and aspirations are greater and distinctive to our own people and country."

On the other hand is the rapid Americanization of the foreigner an advantage or a disadvantage?

The very complete and profound change of character implied by the phrase "The Americanization of the Foreigner" means many times domestic tragedy and congested criminal calendars.

Mr. L. P. Edward says:

"There is only one foreigner who is really a menace to American society. He is the foreigner who is in rapid process of 'Americanization.' The danger point is the foreign-born child and the American-born child of foreign parents. The danger from these classes is real and serious, perhaps the most serious presented in the whole range of immigration questions. Here again we have very reliable statistics which leave no room for reasonable doubt. America needs protection, needs it urgently against the foreigner of the second generation, particularly against the youthful foreigner who goes through our public school system. The father who stubbornly refuses to learn English or to adopt American ways is commonly a man of admirable character. The son, often quite as American as young men of our old stock, is equally commonly a youth of vicious and unprincipled character."

It is a most curious popular misconception that peace and quietness and respect for law and order can be developed in the foreigner by suddenly and violently disturbing his mental life.

Changing a man's language, upsetting his moral and social conventions, altering his inherited tradition of conduct, unsettling his ancestral faith, these are the very best means possible for making him a disbeliever in all established institutions, including those of the United States. Yet this is precisely what "Americanization" aims to do with the best intentions when unduly accelerated is made compulsory.

Respect for government and law is not a natural instinct. It is an artificial attitude built up in the individual by all sorts of direct and indirect social pressure. The breakdown of old habits of thought in any one of the great departments of social activity, very rapidly affects the other phases of conduct. The whole moral life of the individual tends to become unsettled. Nothing is held firmly except the selfish determination to obtain material wealth. Ideas and ideals which stand in the way of this are cast aside. The capable Americanized foreigner possesses all the native American's ruthless aggressiveness without possessing his social, ethical, religious, or political idealism. The corruption of politics and the traffic in citizenship upon which the ward politicians fatten are the direct result of indiscriminate Americanization, and which of the crime in this country is committed by boys and men of this detached group, neither really foreigners nor yet Americans. True Americanization is a slow internal process. It comes from a culture of soul and mind, and where moral character has been established and the best ideals of this country are understood, the external manners and customs take care of themselves. Therefore, let us go very slow with Americanization, particularly in the endeavor to hasten that progress.

Duties and Responsibilities of Federal, State and City Government.

Since it is primarily in congested urban conditions

that are to be found all the etiological factors of the prevalence of tuberculosis and other contagious diseases among immigrants, and the lack of adequate information on the part of the immigrants before embarking for America, is the chief reason for their concentration and gravitation in the most populated centers. It is evident that the distribution of immigrants to the rural sections of the country should be the first part of a program of a constructive immigration policy on the part of the Washington Government, as it is of national concern.

But artificial distribution would not relieve the pressure. It can only be relieved by creating greater economic inducements in the country. Besides, the present laws bar the effective diffusion of immigrants into agricultural pursuits. The law as it stands today does not permit people to come into the country under contract to work. The contract labor clause is at the present moment the first and most unsurmountable bar to the distribution of immigrants out and away from the large cities. In this respect, it is exactly the reverse of the Canadian policy.

Canada accepts her immigrants not on the basis of those that want Canada, but on the basis of those that are wanted by Canada. So could the United States. Canada separates the desirable from the undesirable on the other side of the ocean, not on this side. So could we. Canada reaches an understanding with the foreigners in their own country as to where they are to go and what they are to do when they reach their new homes, and then Canada sees that they go and get the chance to do it. So could we.

We never needed more than we need now, and shall need in the next year or two, stout backs willing to bend to fundamental labor. We cannot get them from our own people. Why not let such immigrants in, when we need them, and need them sorely—not to distinguish between the good or the bad, the necessary and the useless, would be the height of folly.

We should also work for improving living conditions. Houses of industrial workers are often wretched places to live. Good housing laws should be passed and enforced that the poor be protected. An experiment in house building was carried on in Washington, D. C., where two flats of three or four rooms rented for \$10 and \$12 a month, and a rebate of one month a year for care of building, etc. The investment pays 5 per cent.: and one-half per cent for sinking fund. There were in these flats 778 adults and 380 children, the number of birth was 39, and deaths 8, which was a death rate of 7 per thousand. This is what good housing means with reference to health.

Our industrial relations should also be humanized. Many concerns are thinking of the comfort of their employees and doing something to enhance it. Welfare work is gripping many employers and firms are spending more and more each year in this respect. This should be encouraged and guided not as a charity, but as a part of the industry. Our associations have the ear and the confidence of many employers, and can incite them to good works.

Health education should also be encouraged and directed. Not in the building only, but also in the shop and in the communities where the workers live.

We should carry education into the homes of the people, and bring to them the best result of the leaders in the domestic science and right living. A readjustment of the physical department program must be made so that work can be adapted to the need of the industrial worker who may not come to our buildings; in fact, often will not, but who nevertheless needs our ministry.

The relations between the aliens and the law need adjustment, the immigrant must have guaranteed substantial justice, which at the present moment he not always gets. I do not mean, in thus reflecting on our judicial system and methods, to assail individuals, certainly not the judges, whom I have invariably found disposed to consider the human elements in the case, and to make their decision, if possible, err on the side of mercy rather than on that of severity. But, obviously, the effect of discriminatory laws upon such an alien is not a good thing either for him or for the country. In times this respect for American law breaks down. The failure to enact laws to protect the alien from exploitation, violates the spirit, if not the letter, of our treaty agreements.

When the Italian laborer appeared among us he was indeed in bondage, under a cruel master. The padrone, in the days of his ascendancy, took a disastrously large commission for the purchase of the immigrant's steamer ticket, upon his wages after he arrived, upon the rent of his miserable overcrowded abode, and finally, in many cases, with the assistance of a banker, appropriated his savings wholesale. But those abuses are a thing of the past now.

(To be concluded)

Public Health

The Social Worker's Approach to the Family of the Syphilitic.

In the main, the social worker in syphilis need be no different from any good social worker, says Maida H. Solomon. She should possess mental poise, sympathy, tact, and judgment. She must be interested in the medical as well as the social side of the problem. Syphilis is a contagious disease and should not be looked upon as a punishment for sin. The moralist point of view should be avoided. The social worker must enter the lives of her patients as a human being, treating each family according to its individual needs.

In summarizing, the author states that the social worker's duties are:

1. To instruct the family how to avoid infection, emphasizing the seriousness of the situation, but avoiding over-frightening the family.
2. To find out whether any members of the family are infected, by arranging for family examination.
3. To aid the patient in disclosing the fact of syphilis in such a way that the mate acquires the right attitude.
4. To utilize the mate as an ally in making the patient take continuous treatment.
5. To arrange for treatment of syphilitic relatives, and to see that it is carried through by endeavoring to develop a co-operative spirit, especially in the difficult problems of seemingly well relatives and syphilitic children.
6. To secure family examination for early symptom-free syphilitics and late syphilitics, recognizing that this is more difficult to bring about than the examination of the family of contagious patients.

Some of the more pressing situations one must be prepared to deal with are:

1. Readjustment of the mental life of the family.
2. Readjustment of the physical life of the family.
3. Economic difficulties in the families of late syphilitics including such situations as a working wife, diminished income, charitable aids, etc.

One cannot offer any method of dealing with these situations. It is important for the worker to analyze the effect of her methods in each case, to plan new attacks, and to synthesize her successes and failures into a better technique. *Hospital Social Service*, Vol. III, No. 6, 1921.

Nurse Militia to Fight Epidemics

A nation-wide movement to interest cities in building up a reserve of nurses to cope with future epidemics of influenza or other diseases is being considered by physicians who have followed the work along this line accomplished by Dr. John Dill Robertson, Health Commissioner of Chicago. After experiencing the difficulties of the authorities of this and other cities in obtaining nurses to care for the thousands stricken with influenza, Commissioner Robertson developed a training course which not only cost the Chicago government nothing to give, but enabled the city to boast of a nurse militia, as it was called, of 10,000 trained women ready to step in and aid in future epidemics.

While in New York, Commissioner Robertson discussed his work, which has aroused the attention of such medical leaders as the Mayo brothers of Rochester, Minn., as well as the health authorities of many cities. He believes the adoption of his plan was a health-conserving measure of no mean value. He cited Chicago's lowering death rate as proof of the value of a nurses' reserve.

"The shortage of nurses during the first influenza epidemic we had in Chicago gave me the idea of training women of the city to care for the sick," Commissioner Robertson said. "The greater part of the people of a city cannot afford to pay the prices commanded by nurses, even if the supply of professional nurses were adequate. As an economic problem, the desirability of having a trained member in every family able to care for the sick needs no argument. And that is what I set out to do."

"Of course, my efforts met with the opposition of professional nurses, who did not understand what I was trying to do. That was to be expected, but I went ahead just the same and the results have proven the wisdom of my action."

"I interested prominent physicians and public-spirited citizens in the idea of providing an eight weeks' course in nursing. The announcement of the opening of a school brought a gratifying response. The classes from the start have averaged 700 and on our reserve list we have 10,000 names. Sessions are held in the afternoon and evening, thus suiting the convenience of the students."

"The school is headed by a nurse of wide experience and the teaching staff includes some of the most prominent physicians of the city. Half of the course is devoted to health education and the remainder to practical nursing. Textbooks, which become the property of the students, are used and the students repeat in chorus the principles which have been touched upon by the instructor. Upon completing the course the student receives a certificate."

"An enrolment fee of \$5 is charged. The school has been financed chiefly by a health show, the first one of which netted \$92,000. Women graduates of the school sold 125,000 tickets. Two bands were formed by colored and white members of the reserve and together they raised \$16,000."

"With the funds provided we were also able to run a free hospital with twenty beds, where the students could receive first-hand training. There have been only three deaths among 1,400 patients treated in a year. Members of our reserve have aided in 12,000 homes outside of their own. We have a nurse in every block of the city and the end is not in sight. Chicago's death rate is lower than New York's and I believe this is attributable to the training of our people. Our students come from every walk of life, many of them school teachers."

Sequelae of Communicable Diseases of Childhood as a Public Health Problem.

In the opinion of Isaac A. Abt, Chicago, the most valuable lesson to be learned from the study of the sequelae of the communicable diseases is of the need to emphasize the disastrous results not only of the immediate but also of the remote effects, and to urge on all concerned the great importance of their prevention. The most important factor in the prevention of the acute communicable diseases is the acquisition of more definite knowledge as to their cause and their mode of transmission. Experience has taught that intelligent preventive measures can be carried on when exact etiologic factors are known. A rational campaign for prevention of infection must depend on a definite knowledge of the exciting organism, its method of transmission, and its life cycle within and without the body.—(J. A. M. A.)

Sedobrol

"Roche"

THE HOT "BROMIDE BROTH"
for

INSOMNIA

MENOPAUSE

NERVOUS AGITATION

NEURASTHENIA

SICKNESS of PREGNANCY

Each cube contains 17 grains Sodium Bromide, vegetable albumen, and seasoning.



1 or 2 cubes in a cupful of very hot water produces a very palatable broth.

*Sample and Literature
on application*

THE HOFFMANN-LA ROCHE CHEMICAL WORKS

New York

The Management of an Infant's Diet

Constipation

Protein indigestion or the failure to take care of the casein of cow's milk may result in delayed bowel movements.

When constipation in infancy is due to casein curds it is readily overcome by employing some means of preventing the firm coagulation of the casein.

Mellin's Food

acts upon the casein of milk in such a manner that the coagulated casein is presented in a most favorable condition for the action of the digestive fluids; therefore, Mellin's Food is especially indicated in constipation due to faulty protein digestion, and results will at once be apparent if Mellin's Food is used in sufficient amount to thoroughly attenuate the milk casein.

Mellin's Food Company, Boston, Mass.

Amen as a Treatment for Tuberculosis.

I wish to report a case of pulmonary tuberculosis completely cured with forty intramuscular injections of AMEN.

Mary Albanese, of No. 275 Harrison Avenue, Garfield, N. J., age 34 years, married, with four children. A sister died from consumption in Italy five years ago. Last March she began to have persistent cough, pain in the upper part of the left lung, sometimes chills, little fever, respiration rapid, and scanty expectoration. She tried some cough syrup, several kinds of liniments but without any result. She decided to consult me only when she was losing gradually in weight.

I had examined her for the first time on May 28th, 1920. She had no appearance of a tuberculous patient, but the physical signs were: lessened expansion, dullness, and vesiculo-bronchial breathing, moist and crepitant rales on the affected area at the apex of the left lung between the first and the fourth ribs. The sputum was examined by the Department of Health of the State of New Jersey on June 2 with the result that *tubercle bacilli* were present. Another examination showed the presence of *tubercle bacilli* on June 22. On July 1 the patient accepted my advice to undergo a special treatment of intramuscular injections of AMEN.

I injected every day for the first twenty days 1 c.c. of AMEN, then for another twenty days 2 c.c. of AMEN. I did not inject the ampoules of 3 c.c. because the lady said she was all right, all the symptoms and signs having disappeared after forty days of treatment. Her weight was on June 30, 105 lbs.; on August 3, 112 lbs.; on August 13, 118 lbs.

The sputum was examined again by the State Board of Health, and at the Laboratory of Bendiner and Schlesinger, New York, on September 21 with the result: *tubercle bacilli—none found.*

E. CASINI, M.D.,
City Physician,

Member of the Board of Health, Garfield, N. J.

Diagnosis Does not Count With the Patient.

Sick or injured people are not much interested in highly technical methods of classifying and labeling their disease or trouble. They demand treatment instead of diagnosis. Diag-

nosis interests the doctor. Treatment interests the patient.

In an experience gained through furnishing proper support in the cases of more than 45,000 spinal sufferers the Philo Burt Mfg. Company has found much evidence of the existences of the attitude as quoted above. The patient is not so greatly interested in he means employed as in the results attained. The assurance they require is the record of the accomplishment in similar cases.

The Philo Burt Appliance is designed on correct anatomical principles. It is not rigid, yet gives the required support and extension. It is light in weight and comfortable to wear. It is perfectly adjustable and is made to fit each individual patient. The measurements can be easily taken by any physician and the company stands right back of the doctor taking the measurements. A perfect fitting appliance is assured for, should alterations be found necessary they are cheerfully and promptly made.

The Philo Burt Appliance, while primarily intended for the benefit of cases of spinal deformity, scoliosis, lordosis and kyphosis, has been used with similar success in cases of spinal tuberculosis, spinal irritation, and general neurasthenia arising from pressure upon emerging spinal nerves. Wherever there is an inflamed, injured, defective or relaxed conditions, the need of support is indicated and results have proved it to be the proper method of relief or cure in such conditions. Many practitioners are of the opinion that no form of artificial support should be used in any case, but the weight of evidence goes to show the absolute necessity of proper support and fixation in a great percentage of cases. That this is correct procedure is manifest if for not other reason to enable the practitioner to retain a result accomplished through treatment or by proper exercise.

The end results attained through the use of apparatus for relief and benefit in spinal conditions often indicated that, had proper treatment and support of the right kind been used, many conditions might have been cured which after a long period of neglect have become incurable. The future care in all such cases is very important and the improvement depends much upon the right procedure and treatment, with attention looking toward benefit of the general health.

This Doctor Knows—

Here is the synopsis of his statement sworn to before a Notary:

"Thrown over an embankment by runaway team, dislocating lower vertebrae of spine, confined to wheel chair over eight years, treated by some of the best surgeons in the U. S. (names on application), no material benefit. Saw adv. of Philo Burt Appliance in a magazine April, 1921. Wrote describing injury and asking if they believed they could benefit me, reply was offer to make appliance to my measure,



Allows Absolute
Freedom of
Action

He used our Spinal Appliance on himself and for his patients "successfully."

and send on 30 days' trial, money returned if not satisfactory. Ordered appliance and received it in about 10 days—helped me from first day, but could walk only a very little with aid of canes. Now can walk up and down stairs and get into auto without aid of canes and believe in time can walk without the appliance. Have induced other spinal sufferers to use the Philo Burt Method and they are showing wonderful improvement."

WE MAKE THE PHILO BURT SPINAL APPLIANCE
TO ORDER FOR ANY CASE AND ALLOW

30 Day Trial

If you have a case of spinal weakness or deformity under treatment now—no matter whether it is an incipient case or one seriously developed, write us today for full information and measurement blanks. Every appliance is made to order to fit the individual case. It lifts the weight of the head and shoulders off the spine and corrects deflections. It does not chafe nor irritate, weighs ounces where other supports weigh pounds and is easily adjusted to meet improved conditions.

It can be put on and taken off at a moment's notice. It is easily removed for the bath, massage, relaxation or examination. The price is easily within reach of all and each appliance is fitted under our absolute guarantee of satisfaction or money back after 30 days' trial. Write for our Physician's Portfolio and illustrated booklet—there is no charge, and we will explain to you our plan of cooperation with the local physician.

THE PHILO BURT CO., 68-17 Odd Fellows Temple, Jamestown, N. Y.

The Endocrines, Digestive Ferments, Catgut Ligatures, etc.

THE ARMOUR LABORATORY is maintained for the purpose of handling the glands, membranes and other raw materials supplied by our abattoirs in immense quantities, from which important therapeutic agents are extracted and fabricated.

Among the products that the physicians and surgeons use daily are:

Corpus Luteum; Suprarenals, U. S. P.; Parathyroids; Pituitary, Whole Gland; Pituitary, Anterior; Pituitary, Posterior; and other glandular substances in po. and tabs. Pituitary Liquid in 1 c. c. and 1-2 c. c. ampoules.



Suprarenalin Solution 1:1000; Suprarenalin Ointment 1:1000; Pepsin, U. S. P.; Pancreatin, U. S. P.; and other preparations of the Digestive Ferments that are used in stomachic and intestinal disorders and as vehicles for nauseating drugs.

We also make Sterile Surgical Catgut Ligatures, plain and chromic, boilable; and iodized Ligatures, nonboilable. The Armour ligatures are made from Lambs' gut, selected especially for surgical purposes and sterilized at opportune stages in such manner as to preclude the possibility of contamination in the finished strings.

We are headquarters for the Organotherapeutic Agents and are always glad to co-operate with the medical profession

ARMOUR AND COMPANY

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LISTERINE

A Non-Poisonous, Unirritating Antiseptic Solution

Agreeable and satisfactory alike to the Physician, Surgeon, Nurse and Patient. Listerine has a wide field of usefulness and its unvarying quality assures like results under like conditions.

As a wash and dressing for wounds

As a deodorizing, antiseptic lotion

As a gargle, spray or douche

As a mouth-wash-dentifrice

Operative or accidental wounds heal rapidly under a Listerine dressing, as its action does not interfere with the natural reparative processes.

The freedom of Listerine from possibility of poisonous effect is a distinct advantage, and especially so when the preparation is prescribed for employment in the home.

LAMBERT PHARMACAL COMPANY

ST. LOUIS, MO., U. S. A.

The St. Louis Meeting of the American Medical Association.

The American Medical Association is a scientific organization, but is composed of members with more than the average amount of "humanity" in their make-up with social elements too long repressed. These members are weary from bearing the responsibility of many human lives. Instead of having play time they have become public teachers with no recess. The local entertainment committee of the A. M. A. have been busy preparing to show these visitors true St. Louis hospitality and to provide for them such diversions as will be both restful and entertaining.

The Golfers will arrive early in order to participate in the Annual Tournament on Monday, May 22nd.

Tuesday evening the Opening Meeting will be held in the Odeon and arrangements are being made to have the music and addresses transmitted by radio to various parts of the city and to distant cities.

Wednesday evening is given over to banquets such as Alumni, Fraternal, Sectional, etc. On this evening provision is being made to entertain the visiting ladies and those doctors who are not engaged at the Alumni and Fraternity dinners at one of St. Louis' noted Moving Picture Shows with special musical and other features for the occasion.

On Thursday afternoon the Medical Department of Washington University is giving a special Tea on the grounds of the institution. Thursday evening will be given over entirely to the President's Reception and it is hoped that as many as possible of the doctors and their ladies will grace the occasion with their presence.

The committee after visiting the offices of the Mayor and the Director of Public Welfare and being assured of their co-operation have decided to reserve until Friday evening the chief feature of their entertainment by giving a special program for the entire association in the unique open air Municipal Opera which has a comfortable seating capacity of ten thousand. The location of the opera in the heart of Forest Park with its special lighting effect made possible by the natural foliage of the forest can be appreciated only by those who visit it at night. It is the hope of the committee that every visitor at the convention will remain in St. Louis through Friday evening.

The Ladies' Entertainment Committee under the leadership of Mrs. Willard Bartlett has arranged to take immediate charge of every lady visitor who may be persuaded to accompany the medical member of the family to the convention. They need have no fear of being left alone while the doctor is attending the scientific meetings, for practically every hour of their time has been arranged for and it is hoped that many more ladies than usual will visit the "City of Homes"—"The Friendly City."

A special visit to Missouri Botanical Gardens is being arranged and will be an important item in the entertainment program. Among other features to be shown will be an old Italian Herb Garden. St. Louis is justly proud of its world famous Botanical Garden.

Take the whole week off, Doctor, and spend it in St. Louis. It will be time well spent. You may lose a patient, some may get well during your absence, but your increased vigor when you get back will abundantly make up for any losses. Come to our party for one full week.

Dr. C. E. Buford, 3525 Pine Street, is Chairman of the Entertainment Committee.

Hypertension.

While it is to be regretted that a certain minority of the medical profession are disposed to ignore the significance of high blood pressure, it is, on the other hand, a matter of congratulation that there is a steadily growing disposition on the parts of most physicians to recognize that hypertension always means something. In other words, the existence of high blood pressure is always a danger signal.

It is sometimes the first indication of coming serious trouble. Consequently, the physician who makes it a habit, as well as a rule, to carefully take blood pressure readings in such cases as suggest to him the possibility of hypertension is often able to save his patients from serious difficulty or even fatal disease. Pulvoids Natrium Compound is a preparation of choice. It is composed of tested and proven agents whose action is at the same time safe and sure. It can be given without disturbing the stomach or affecting renal function, and what is most important, its use can be continued in suitable dosage over long periods of time, not only to bring down the blood pressure but to keep it down.

The makers of Pulvoids Natrium Compound have prepared an interesting booklet dealing with the subject of blood pressure, which will be sent gratis to any physician on request.

Furthermore, because medical literature abounds with refer-

ences to blood pressure, the Drug Products Co., Inc., has decided to issue from time to time a little periodical under the name of "Drug Products," in which will be selected and compiled, combined and epitomized, all of the reliable reports having to do with this important subject of blood pressure. The first issue of this periodical has been mailed to a selected list of physicians and has received most favorable comment. A copy of "Drug Products" will be sent to any physician on request, and doctors are earnestly requested to send in their names and addresses in case they desire to receive every copy of this periodical as soon as it is issued.

The Drug Products Co., Inc., 156 Meadow Street, Long Island City, New York, also makes a number of useful pharmaceutical specialties, literature and price lists of which will be sent on request.

Dinner to Dr. Rusby.

The officers of the H. K. Mulford Company entertained Dr. H. S. Rusby, director of the Mulford Biological Exploration of the Amazon Valley, at luncheon on March 17.

To paraphrase Kipling, Dr. Rusby has indeed "lived more stories during his brief sojourn in South America than any novelist could invent in a lifetime," and graphically recounted his experiences, hardships, etc., all of which were tinged with the regret that on account of ill health he was compelled to abandon the expedition and delegate the leadership to other hands.

In addition to the officers and executives of the Mulford Company there were present a number of their district representatives, who had been called to Philadelphia for an intensive course of instructions in the laboratories and to meet Dr. Rusby. These included M. K. Baird, Chicago; E. V. Clark, Minnesota; E. H. Long, Dallas; W. G. Stoll, Buffalo; F. C. Humphries, Florida; Geo. Wilkes, Memphis; C. E. Greiner, Kansas City; E. A. Monell, St. Louis, and W. T. Ellis, Ohio.

Passing of the Medical Record

April 22nd marks the passing of the last of the old independent medical weeklies—the *Medical Record*. The final issue as a separate publication appeared on that date and announcement was made that the *Medical Record* had been sold to, and combined with, the *New York Medical Journal*, which appears semi-monthly.

Throughout the fifty-six years of its service to the profession, the *Medical Record* has had the same publishers and but two editors. Dr. George F. Shradley guided its course for the first thirty-eight years and was succeeded by his assistant, Dr. Thomas L. Stedman, who has long been dean of American medical editors, and widely esteemed. The famous old firm of William Wood & Company will now devote its energies entirely to the publication of medical books, in which service it has been engaged for 118 years.

It is interesting to recall that many of the most important discoveries and developments in the progress of medicine were first announced to the American profession by the *Medical Record*. These include Lister's method of antiseptics; Koch's discovery of the tubercle bacillus and that of tuberculin; the employment of cocaine in eye surgery; the Roentgen rays; the discovery of the antitoxin of tetanus and that of diphtheria; Madame Curie's discovery of radium and many others.

Every Surgeon is Interested in a Surgically Clean Intestinal Canal.

The paramount importance of a clean gut is recognized by every man doing operative work.

The success or the failure of an otherwise perfect piece of abdominal surgery may depend upon whether or not any complications may be developed from the toxins retained in the intestinal canal, or adherent to the intestinal walls.

One of the surest of all means of eliminating this complication lies in the use of Liquid Alboline—the genuine Russian Mineral Oil. Liquid Alboline has a higher degree of mix, penetration and lubrication than any other mineral oil. It softens and removes scybala, and all intestinal debris, and leaves the gut in the most perfect condition for normal post-operative functioning. It was with Russian mineral oil that the original experiments of Sir Arbuthnot Lane were made, proving the superior value of mineral oil for providing the completest possible intestinal evacuation.

Send to McKesson & Robbins for a most instructive and interesting booklet, "Below The Equator." Address them at 93 Fulton Street, New York.

Sir Auckland Geddes, the present British Ambassador to the United States, is a physician.—(*Med. Facts.*)

The control of
Rheumatic Pain

by the application of -

K-Y ANALGESIC

("The Greaseless Anodyne")

will be found a valuable adjunct to your internal treatment. Repeat as often as necessary. Always wash off previous application

Samples on request

Mention this Journal



**Headache
and Neuralgia**

are relieved by the rubbing in of

K-Y ANALGESIC

("The Greaseless Anodyne")

"A safe,
harmless way
that works
most of the time"

Samples on request

Mention this Journal

**In Your Bag
On Your Office Washstand
At the Patient's Home**

are three places where a bottle of

SYNOL SOAP

should always be kept, assuring yourself of a thorough cleansing of your hands before and after examinations. Synol Soap is antiseptic, cleansing and emollient.

Samples on request.

**Effective
Surgical Lubrication**

is assured by the use of

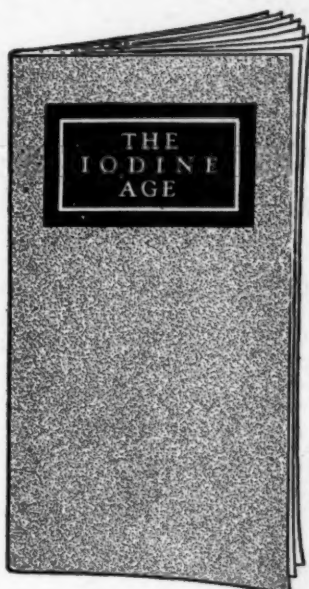
K-Y LUBRICATING JELLY

Contains no grease, soluble in water, easily removed, does not stain the skin or clothing. Non-irritating, soothing and emollient.

Samples on request
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The Therapeutic Value of Iodine



If you have not had a copy, send for one today.

is recognized today as never before. With many physicians this has been due to the fact that through the use of

BURNHAM'S SOLUBLE IODINE

they have been able to administer a free and active iodine in adequate dosage, and for sufficiently long and continuous periods to produce the results desired—and with notable freedom from disagreeable or deleterious effects.

Because of the foregoing, Burnham's Soluble Iodine has been found by many medical men an exceptionally valuable remedy—often a life-saver—in the treatment of the acute septic infections, notably pneumonia, influenza, empyema, septic sore throat, quinsy, septicemia, peritonitis, and countless other grave diseases.

An interesting brochure on "The Iodine Age" has been issued recently, giving treatment and dosage directions that make it invaluable to those seeking fullest benefits from iodine-therapy. A copy will be sent on request to

BURNHAM SOLUBLE IODINE CO.
AUBURNDALE, MASS.

Current Progress in Science and Practice of Anesthesia.

J. T. Gwathmey, New York, discusses the value of utilizing the synergistic action of magnesium sulphate with morphin as a preliminary to anesthesia. It seems to act mechanically with morphin, holding this drug in contact with the tissues longer than it is able to maintain such contact alone; but with ether, and also with nitrous oxid and oxygen, it acts by deepening or increasing the effect, rather than by prolonging it. Hence the same amount of morphin may be used with magnesium sulphate as with sterile water. For instance, $\frac{1}{4}$ grain of morphin in 1 or 2 c.c. of a 25 per cent. solution of chemically pure magnesium sulphate is increased in value from 50 to 100 per cent., as compared to the same amount of morphin used in sterile water. One hypodermic of the mixture will relieve pain for from ten to thirty hours, as compared with two to four hours with sterile water. When magnesium sulphate is used with ether, the latter may be cut one-third to one-half in amount. When magnesium sulphate is used with nitrous oxid and oxygen, the oxygen may be considerably increased and the nitrous oxid decreased.—(J. A. M. A.)

Disorders of Speech.

Smiley Blanton, Madison, Wis., believes the disorders of speech to be due to the lack of ability to adapt oneself emotionally to social situations, or to a faulty motor mechanism, either hereditary or acquired. The most worthwhile results which are obtained at present are those which aim at the underlying cause and at general hygiene, and muscle training. Training aimed at the alleviation of the symptom alone is pernicious because it obscures the issue and in hysterical cases actually "sets" the disorder. This is most distinctly a medical problem, and neropsychiatric training is necessary for the diagnosis and treatment of these patients. Blanton urges the necessity for training medical students in the value of speech disorders as a significant symptom.—(J. A. M. A.)

Transperitoneal Cesarean Section.

Before each operation Gordon G. Copeland, Toronto, Canada, explains to each of his assistants the exact procedures he will probably perform, and how and when he will expect them to carry out the particular parts he will assign to each of them. This is an absolutely essential part of his technic. These details are described. As for the operation itself: An incision is made from above downward for about 5 inches, more or less, depending on the patient. The incision is started about an inch above and an inch to the right of the umbilicus to compensate for the usual dextrarotation of the uterus, and also to prevent the wound's being drawn down into a hole, which happens if the cut is too close to the umbilicus, which sinks in during convalescence. The peritoneum is opened. The uterus, still in the abdomen, is opened in its anterior upper third in its midline, using a fresh knife. Generally, three strokes are employed in making the 5 inch opening. The membranes are opened, and a foot grasped and the child carefully extracted. The afterbirth is removed and 1 c.c. pituitary extract is injected into the uterus in different parts. In closing the uterine wound deep bites are taken through the whole of the uterine muscle down to the mucosa, using a running suture. Usually one layer to the muscle is sufficient, occasionally two. The peritoneal surface of the uterus is inverted with a Cushing suture. When finished, no sutures show, the uterus is quite smooth, and only two knots are visible. Adhesions are minimized. In the average operation, Copeland asserts he has taken five minutes from the time of the first skin cut.—(J. A. M. A.)

Recurrence in Infantile Gonorrhea.

Valentin relates her experiences in the treatment of 161 cases of infantile gonorrhea. Cause for recurrence she finds in the fact that gonococci in the hands or neighboring organs were not easily accessible to the treatment. In 61 of the children in whom recurrences occurred, gonococci were found to persist in the rectum.—(Deut. Med. Woch., June 2, 1921.)

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Value of Drugs in Urology.

A list of drugs applicable to urology was prepared by Hugh H. Young, Baltimore, from "Useful Drugs" and "New and Nonofficial Remedies," and sent out to thirty of the best known urologists of this country. The eighteen drugs receiving the approval of 50 per cent of the urologists are: hexamethylenamin, silver nitrate, potassium permanganate, argyrol, potassium iodid, neoarsphenamin, arsphenamin, boric acid, oil of santal, protargol, mercuric chlorid, sodium acid phosphate, tincture of iodine mercuric salicylate, balsam of Peru, glycerin, sulphate of zinc and phenol. Thirty per cent approved of twenty-five drugs. A few drugs like mercurochrome, benzyl benzoate and benzyl alcohol were not submitted to the vote. Hexamethylenamin stands first in the list, although as usually given it is almost inert. Unless the urine is quite acid, formaldehyd is not liberated in the kidney in sufficient quantity to be germicidal or even inhibitory.

Water should be drunk sparingly—the urine should not be too dilute—and acidifiers, such as acid sodium phosphate and sodium benzoate, 40 grains daily, should be taken along with large doses of hexamethylenamin (from 60 to 90 grains daily) to be of value. Silver nitrate is indispensable as being probably the most important antiseptic and caustic in chronic inflammations and ulcerations. The next two in popularity, potassium permanganate and argyrol, have been shown experimentally to be very weak antiseptics. Their value undoubtedly is due to the fact that they produce little reaction and irritation. Potassium iodid, the arphenamins and various mercurials are essentials; but it is interesting to note that mercuric salicylate has displaced the iodids of mercury, although the ancient mercurial inunctions still rank high. The gray oil used by the British and mercuric cyanid and the benzoate, so popular in France, are little used in America. The rest of the list is silent testimony to the fact that the urologist is not a polpharmacist, and that many widely heralded and much advertised preparations have not provide acceptable.—(J. A. M. A.)

Biopsy of Intestinal Tumors and a New Specimen Forceps.

Frank C. Yeomans of New York, at the last meeting of the American Proctologic Society, said that no one would gainsay the desirability of ante-operative biopsy, when feasible, to confirm the clinical diagnosis of intestinal tumors, because it has the practical advantage of enabling the surgeon to plan operation in accord with the findings. The dangers of diagnostic incision have been justly emphasized, but in general there is little danger from excision by clean cutting, but rough handling, kneading or crushing of tissues is to be scrupulously avoided.

The experienced clinician can diagnose with considerable accuracy certain lesions of the rectum within the palpable area. He is less positive in the early stages of indurated ulcers, strictures, tuberculoma and benign and malignant growths. When the lesions are beyond reach, the valuable data of direct palpation are not obtainable.

To surmount this difficulty, about four years ago, the writer devised the biopsy forceps, which he presented, and said he had used in a large number of cases with most gratifying results and no unfavorable consequences. The technique is simple and painless. The sigmoidoscope is introduced with the patient in the knee-chest posture, the forceps passed through under direct inspection, and section "written out" at a point in the pathologic process likely to yield the most information under the microscope. The slight bleeding is promptly controlled by the application of pure carbolic acid.

Biopsy is contra-indicated in tuberculous enlargement of the mesorectal lymphatic glands in children, in their metastatic involvement by carcinoma, in adults, and in infiltration of the cul-de-sac of Douglas by a neoplasm or tuberculous peritonitis.

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Other writers in the current journals are no less certain that the appropriate bacterin is useful in pneumonia, and in rheumatism and arthritis also. The Abbott Laboratories supply a number of bacterins, both in one-dose ampules and in bulk containers holding several consecutive doses, applying to a broad range of diseases, all those in short that are commonly treated with this class of agents. One may be sure that bacterins from this source are reliable, prepared as they are under the best of working conditions and most careful supervision. Among the leading Abbott Bacterins are Acne-Combined-Bacterin, Gonococcus-Combined-Bacterin, Vancott-Combined-Bacterin and Streptococcus-Rheumaticus-Combined-Bacterin. A complete list with price may be obtained by writing to The Abbott Laboratories, Chicago.

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Author concludes that time is a very important factor in the treatment of syphilis. The patient must have a certain amount of salvarsan, from 120 to 180 decigrams, and its administration in appropriate doses must be spread over a considerable period of time. In primary and secondary syphilis the salvarsan should be administered within a period of about a year and results may be expected within the next half year. In tertiary syphilis the treatment is to be spread over a greater period of time, two to three years before results may be expected. Having arrived at this point the treatment should not be stopped—further treatment is advisable for all of these patients. How much and for how long future judgment must decide.—(*Am. Jour. Med. Sci.*, October, 1921.)

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